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PROCEEDINGS OF THE FIRST MONTANA PLANNING INSTITUTE

**Missoula, Montana
September 18 and 19, 1959**

**Co-sponsored by
Montana State University
Montana State Planning Board
Association of Montana Planning Boards**



**Publication No. 2
Bureau of Government Research
Montana State University
Missoula, Montana
January, 1960**

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INTRODUCTION

Sometime in 1958, representatives of the Montana State Planning Board, Montana State University and Montana State College, and of one or more of the city-county planning boards recently established in the state began to meet informally to seek some coordination of ideas and interests relating to local planning in Montana. At one of these gatherings the first Montana Planning Institute was conceived, and the roster of the program committee for the Institute rather accurately reflects the attendance at the informal coordinating sessions.

The leading spirit in the informal sessions and for the Institute was David K. Hartley, assistant director of the State Planning Board. He assumed responsibility for details of the program while interested faculty of the University undertook local arrangements. Others of the program committee contributed materially in various ways to success of the Institute.

Scheduled presentations were transcribed as delivered at the sessions and the informal nature of the Institute is reflected in the proceedings printed here. Lively discussion greeted some of the featured talks and papers and it is unfortunate that costs and other circumstances have prevented inclusion of these portions of the program in the Proceedings.

David Hartley had assembled most of the manuscript at the time he resigned his State Planning Board position to accept employment in Washington, D.C. The Bureau of Government Research at Montana State University undertook belatedly to complete publication and some delay attended this shift of responsibility.

Credit for a lively, intensely-paced Institute must be given to Hartley, to the speakers and others of the program committee than the undersigned, and to the four-score or more members of local planning boards and interested laymen who contributed a beautiful autumn weekend, travel from all parts of the state, and their durable attention and interest.

It is the earnest hope of those who sponsored this Institute that it may be the first of many to make growth of vital local planning as Montana enters its urban era in the 'Sixties.

Ellis Waldron, Acting Director
Bureau of Government Research

January 11, 1960

PROGRAM COMMITTEE

Montana State Planning Board

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Montana State University

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and Anthropology

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Montana State College

L. C. Gerckens, Department of Architecture

David Wessel, Department of Architecture

Ron Thompson, Planning Consultant, Butte

George Plescher, Director, Great Falls City-County Planning Board

PROGRAM

FIRST MONTANA PLANNING INSTITUTE

September 18-19, 1959

Missoula, Montana

Co-sponsored by
Montana State University
Montana State Planning Board
Association of Montana Planning Boards

FRIDAY — SEPTEMBER 18, 1959

3:00 to 6:00 p.m.—Registration—Florence Hotel Lobby

5:30 p.m.—Reception, Mezzanine of Florence Hotel

6:30 p.m.—Dinner, Governor's Room of Florence Hotel

7:00 p.m.—Annual Meeting of Association of Montana Planning
Boards—*Welcoming Remarks:*

D. P. Fabrick,
Chairman, Montana State Planning Board

Dr. Harry K. Newburn,
President, Montana State University

Alfred F. Klingler, Executive Director
Montana Municipal League

H. Cleveland Hall, President
Association of Montana Planning Boards

Premiere Showing of Planning Movie—“*Blueprint for Progress*”

Informal Discussion

SATURDAY — SEPTEMBER 19, 1959

7:00 a.m. to Noon—Registration—MSU Lodge

7:30 a.m.—Breakfast, MSU Lodge

8:30 a.m.—HIGHWAYS AND MAJOR STREETS

"Streets in the Master Plan," Ron Thompson: Ronald Thompson & Associates, Planning Consultants, Butte

"Major Thoroughfares Planning," Maurice RiChey: Traffic Engineer, State Highway Department, Helena

Discussion and Questions

10:00 a.m.—Coffee

FRIDAY — SEPTEMBER 18, 1959

10:15 a.m.—ZONING IN MONTANA

"How Land Is Zoned in Montana," L. C. Gerckens: Department of Architecture, Montana State College, Bozeman; Member, Bozeman City-County Planning Board

"Basic Data Needed for Good Zoning," George Plescher: Director, Great Falls City-County Planning Board

"Functions of Planning Boards and Boards of Adjustment in Montana Law," H. Cleveland Hall: Attorney; President, Great Falls City-County Planning Board

"Survey of Zoning in Montana," Dr. Ellis Waldron: Acting Director, Bureau of Government Research, Montana State University, Missoula

Discussion and Questions

12:00 noon—Luncheon Session, MSU Lodge

Speaker: *"Long Range Planning for Industries Development,"* David D. Moore, Manager, Economics Division, Battelle Memorial Institute, Columbus, Ohio; Coordinator of Economic Study for Alaska International Rail and Highway Commission

1:30 p.m.—SUBDIVISION CONTROL IN MONTANA

"How Urban Land Is Controlled in Montana," Vernon R. Peterson: Missoula County Surveyor; President, Missoula City-County Planning Board

"Good Subdivision Design," R. W. Christensen: Chief Land Planner, Federal Housing Administration, Seattle

"Utilities in New Subdivisions," C. W. Brinck: Director of Environmental Sanitation, State Board of Health, Helena

Discussion and Questions

3:00 p.m.—Coffee

3:15 p.m.—INTEGRATING MOBILE HOMES INTO THE COMMUNITY

"Trailers Bring Problems," William Swanberg: Mayor, Great Falls

"Mobile Home Parks in the Comprehensive Plan," Dr. Marshall Powers: Director, Park Division, Mobile Homes Manufacturing Association, Chicago

Discussion and Questions

4:45 p.m.—Exhibit Time

Tour of Montana State University Campus

6:00 p.m.—Dinner, Governor's Room of Florence Hotel

Speaker: *"Community Planning and Development,"* Dr. Paul B. Blomgren, Dean, School of Business, Montana State University

7:30 p.m.—PARKS AND PLANNING," Florence Hotel

"How Much Recreation Area Does a Community Need?"
Dr. Harry Caldwell: Planning Consultant; Department of Geography, University of Idaho, Moscow, Idaho

"Acquiring Parks in Montana," Gene Trotter: Architect; President, Billings City-County Planning Board
Discussion and Questions

9:00 p.m.—*"Perspective: Responsibilities of Planning Boards,"*
E. O. Sowerwine, Jr., Director, Montana State Planning Board

9:15 p.m.—Adjournment

Saturday, September 19, 1959

MORNING SESSION

HIGHWAYS AND MAJOR STREETS

STREETS IN THE MASTER PLAN

Ron Thompson

Ronald Thompson & Associates, Planning Consultants, Butte

In the United States since 1930, motor vehicles have multiplied five times as rapidly as the nation's population. The increase for motor vehicles has been 150%; and for the population 30%.

By 1975, motor vehicles are expected to show an increase twice as great as the population rise. The 1975 forecast: car registration over 100 million or a gain of 50% over present totals, coupled with an estimated population of 215 million—a rise of 27%. Going on past trends alone, if all these cars were laid bumper to bumper you could be sure that someone would attempt to overtake them.

From 1947 to 1957, motor vehicle registration in Montana increased from 205 thousand to 380 thousand—or a gain of 175 thousand cars. In other words, if we think we have traffic and parking problems in Montana today—what of tomorrow?

Because the rising tide of automobiles pouring into cities hampers free commercial movement, there is growing awareness of the need for some drastic measures. So far, few responsible public officials have had the temerity to ban private cars from downtown areas, although some cities have experimented with the idea. These include Toledo, Ohio, Springfield, Oregon, and various other communities all interested in the "pedestrian mall" and intent upon returning the downtown retail street to the pedestrian. Much criticism and confusion can attend the development of a "pedestrian mall," ranging from difficulties of truck service access to stores to relocation of traffic congestion at the outskirts of the relieved area. The moral of most "mall" experiments has been plan, experiment, and plan again.

On the other side of the traffic picture in New York's Westchester County not so long ago a man was arrested for walking to work! It was not the principle to which the authorities objected . . . it was perhaps the circumstances. It happened this way: An intrepid pantryman, heading for the restaurant where he was employed, descended from a bus on the far side of the New York State Thruway and then ventured across its several lanes on foot. The restaurant had been "marooned" on an "island"

between the newly completed Throughway and a pre-existing parkway road and so was left with no legal access except by private car. In other words it was against the law for a *pedestrian* to enter the grounds of the restaurant.

Yet another symptom of our era: downtown, once a pleasant meeting place and an invitation to shoppers, is now an area where people and vehicles jostle each other through the same narrow streets; indiscriminately cross the joint intersections; and fight for space along the same crowded curbs. An area where such superficial devices as stop signs, walk lights and miles of painted lines on pavements and curbs may keep the pedestrian from charging directly into a stream of cars and busses—or vice versa. This urban dilemma will just as surely increase in Montana cities, as it has in all the large cities of the world, unless steps are taken now to direct our thinking toward our physical future. The suburban fallout from our urban centers has already started and will continue with increasing tempo as existing and new influences for growth make their pressures felt around us in the immediate years to come.

Perhaps at this time, a definition of traffic engineering, as adopted by the Institute of Traffic Engineers, might help us crystallize our objectives:

Traffic engineering is that phase of engineering which deals with the planning and geometric design of streets, highways and abutting lands, and with traffic operation thereon, as their use is related to the safe, convenient, and economic transportation of persons and goods.

We should place special emphasis upon the three words "safe, convenient, and economic."

Preparation of a plan for major thoroughfares in step with a city's economy and development was never more important than today. This is particularly true for those communities in Montana which are fortunate enough to be located upon the Interstate Highway. It has been my experience as a planning consultant, that cities and towns located upon the Interstate System are becoming very much aware of the possible changes in traffic direction, volume, and character. In most cases in Montana, planning boards are facing up to these possible traffic changes by preparation of major street plans and zoning ordinances to protect the future entrances to their towns.

It could be said that new highway location and construction in Montana has set the pattern for future master planning programs and that this in some cases has hampered the urban planner in

developing the most efficient plan for his community. The situation is not a reflection upon our highway builders—but is rather a result of the lack of planning in the past. Planners, both professional and members of planning boards, must realize the urgency of the situation and take a position of planning now for future development, rather than producing a “mustard plaster” for alleviation of immediate problems.

The urban planner, in his work to improve the city, endeavors to induce better distribution and location of schools, industries, shopping centers, residential areas and the circulation system of streets and highways. The preparation of a comprehensive plan for arterials requires a careful analysis of all development factors in the community—transportation requirements; an inventory of the existing streets; origin and destination of traffic movements; traffic flows; parking space demand and supply; an inventory of housing; employment; schools, parks; shopping and other major land uses; together with calculated estimates of possible changes in the future. A project of such scope requires the melding of a great number of talents including those of businessmen; municipal agencies; trucking firms; transit officials and many others. Because of its broad function and its city-wide approach, the city-county planning board is, in my opinion, the logical agency to guide the work, charged as they are with “the preparation of a master plan” and “careful and comprehensive surveys and studies of existing conditions and the probable future growth of the city and its environs or of the county.”

The requirements of a system of major thoroughfares for Montana urban areas should be based upon the expected land use as outlined in their master plans. Land use studies are to be discussed in greater detail later today.

Effort must be made to provide a geometric system of streets which will prove sufficiently flexible to cope with the unforeseen changes in land use that will almost inevitably take place. Essential components of the plan should be as follows:

a) Adequate cross-town routes or an internal loop system must be developed for the business area to divert local through-traffic from the core area. This may be accomplished by opening new streets to connect existing streets; by revising radial streets to connect with the internal loop; or by widening, improving or making use of one-way couplets for existing streets.

b) Improved radial arterials may be obtained by widening exist-

ing streets; banning curb parking; making use of long one-way couplets or by the construction of new facilities.

c) The plan must be developed in a manner which will permit "stage" construction, and in my opinion it must transcend political boundaries.

d) Future street and building lines must be established where high volumes of traffic are expected. For example: a sixty foot street may be developed as a four-lane arterial, but only at the expense of crowding street furniture—such as power poles or hydrants—into a six foot curb and sidewalk area, with no allowance for a boulevard. Although various arguments can be advanced against curb boulevards, it is thought that in Montana the expedition of snow removal and the reduction of 'pedestrian splash" from thawing, heavily travelled arterials almost compels the provision of boulevards.

The major thoroughfares plan will represent a relatively small percentage of the total street mileage in your community but will carry a high percentage of the traffic. As these arterials are improved and developed so more traffic will be attracted to them in moving from one part of the urban area to another. This serves to protect the residential areas from depreciation by the diversion of large volumes of traffic *around* the living areas rather than *through* them.

A major streets system must be designed to serve the special needs of the area and for this reason such a system is individual in design yet wide in scope for future use and growth. Irrigated-land farmers in Billings, for example, require easy access to the sugar beet factory for their trucks; while open pit operations in Butte will bring yet another directional change of traffic flows in the future. In our street planning, however, we must take care to integrate proposals for best utilization, greatest economy, ease of flow and safety for all users.

What are some of the tools which we may use in preparing a major streets plan? Zoning plays an important part in controlling development and the use of land, and by this control further traffic congestion resulting from the improper location of business or industrial uses may often be avoided.

Let us study briefly the uses of zoning in traffic control. The restriction of the use of property in the interests of best use of the streets may be accomplished under zoning in two ways: first by limiting the intensity of property use to fit street capacity; and second by distributing the types of property use to fit street layout.

The first is bulk zoning; the second, use zoning. Both are applicable over the entire city, but the former, bulk zoning, has its particular field in the built-up sections where traffic difficulties generally appear first and where the character of the property use is already determined beyond the power of zoning to change it materially.

One problem to be faced in our street planning is that every improvement for increasing the traffic capacity of a street increases the accessibility of the abutting properties and directly enhances their value.

The owners of these properties are seldom slow to take advantage of the new situation by erecting more commodious buildings which, in turn, represent enlarged traffic generation, soon overtaking the new highway and demanding still further improvement—and all at the expense of the general taxpayer. Without the interposition of zoning, the city is powerless to stop the recurrence of these cycles—for its control would extend only to the facilities for traffic and *not* to the causes or results. And even that control is limited, because it is responsive to popular clamor which takes account of little beyond demands of the moment.

That the cycles bring only increased congestion, less daylight, less wholesome air in city life, and heavier financial burdens on the public, is sufficient reason for bringing these cycles to a stop. Zoning embodies the power to do this—but gradually. Intelligently applied, it gives notice far enough ahead for the community to adjust itself to the ultimate limit, before that limit is reached.

The thoroughfare system is supposed to connect the various localities of a city with one another and with outside points, and over connecting links, in each case ample for the traffic wanting to use them. *Minor* streets are supposed to collect or distribute all the units of traffic using the *thoroughfares*, to their individual destinations within the various localities. The more nearly a street system does this with expedition and convenience, the more nearly perfect it is. The more nearly the number and desired routings of the units of urban travel can be determined in advance, the more perfect a street system can be designed to serve them. Intelligent land use planning and zoning provides a definite basis for just such calculations. By designating the kinds of activity permissible in various parts of the city, it controls the transfer of traffic between them.

Different kinds of activities produce different *kinds* of traffic as well as different *amounts*. Zoning classifies the various localities or districts according to the activities to be conducted in them, bas-

ing designation, as of course you know, on dominant present day use, natural fitness, or the needs of the community. It then fixes the classification and in so doing, it fixes the basis for traffic calculation on the assumption of definite areas ultimately to be occupied by definite types of activity, the traffic requirements of which are known. This knowledge of the future patterns of land use within the community, including the densities of population to be permitted in future development, is one of the basic requirements for the preparation of an efficient major streets plan.

Briefly then, zoning helps the traffic situation by showing where people are going to live, and how many are going to live there; where people work, and how many are going to work there. In places where expansion or change in the streets system is possible, zoning provides the basis for determining the extent and nature of the changes needed.

The chaotic growth characteristics of American cities largely nullify city planning efforts. Zoning, by marshalling the factors of growth under an orderly control, makes scientific city planning possible.

Another planning tool to be applied in traffic engineering will be discussed in detail today by Mr. Bob Christensen, Land Planner of the F.H.A. This aid to traffic control is the adoption of adequate subdivision standards and regulations. Suburban growth in our Montana communities has immeasurably complicated the provision of an adequate system of arterial streets and safe residential subdivision. It is essential that you, as city-county planning board members, should carefully scrutinize all plats, to ensure that extensions of major arterials are not blocked by subdivisions and that the arrangement of the streets within the proposed subdivision will prove safe, efficient, and generally advantageous to the future growth of the city.

In general terms the major streets plan will provide the framework upon which a master plan is assembled and this framework will in itself dictate the future patterns of urban land use.

MAJOR THOROUGHFARE PLANNING

Maurice RiChey

Traffic Engineer, Montana State Highway Commission

In 1957 the legislature of Montana, in Section 1 of Chapter 246, the legislative act establishing city-county planning boards, stated that: "It is the object of this legislation to encourage local units of government to improve the present health, safety, convenience, and welfare of their citizens and to plan for the future development of their communities to the end that highway systems be carefully planned, that new community centers grow only with adequate highway, utility, health, educational, and recreational facilities..."

I would like to call your attention to the heavy emphasis placed upon highway or thoroughfare planning by the legislature as a duty and function of city-county planning boards.

This, to my knowledge, is the first specific legal delegation of authority for responsible highway planning in our history in Montana. Prior to this time, major thoroughfare planning was a matter of happenstance.

In Montana, as in other portions of the West, the older cities developed major thoroughfares parallel and perpendicular to the river frontage where business had developed in response to the river traffic. A very typical illustration of this type of growth is Fort Benton.

The advent of the railroad brought a similar development with respect to the railroad depot. The major street pattern was laid out on a gridiron basis, parallel and perpendicular to the railroad alignment. The business district grew in the area immediately adjacent to the depot. Any number of illustrations of this type of community growth are illustrated in Montana: Havre, Glendive, and Miles City, to name several.

The coming of the automobile and the demand for better highways caused the organization of highway departments at the state level immediately following World War I. In the 1920's, the federal aid system was instituted and a primary road system was laid out connecting each county seat in the state.

Construction of the state highway usually ended at the city limits, connecting directly to the major thoroughfare through the business district. The pattern of highway construction in Montana is now changing. More and more the problems of urban highway reconstruction are coming to the fore. Congestion, inadequate parking

facilities, and excessive restriction on travel movement in downtown areas have caused the strip development of business along existing state highways, with a consequent expansion of congestion and hazards to the outskirts of the city.

Today the immediate problems of access to the central business district face us, along with the construction of belt highways linking the integral portions of the city and, at the same time, bypassing the business district. Additionally, we have the problems of bypassing the city for the convenience of through traffic, elimination of truck traffic, and easing congestion on already overloaded streets.

How do we approach the problem? What type of thoroughfare is applicable to an individual problem? What are the dimensions required for the various types of highways? What are the steps in planning?

For many years in the future, the primary problem of Montana communities will be the development and construction of major streets serving downtown business districts and through traffic jointly. We will, for the purposes of this discussion, define a major street as an arterial highway with intersections at grade and direct access to the abutting property, and on which geometric design and traffic control measures are used to expedite the safe movement of through traffic. Such a facility may be either a two-lane or a four-lane highway, and if four-lane, will usually be divided by a median or barrier strip with openings for cross traffic at each cross street intersection.

A two-lane arterial street should be desirably 44 feet in width. This width provides two 12-foot travel lanes and two 10-foot parking lanes. Setbacks of buildings should provide for adequate sidewalks and planting between the sidewalk and street. The capacity of such a facility will vary from a design standpoint from 250 vehicles per hour in downtown areas to 500 vehicles per hour in outlying districts. The critical capacity problem occurs at signalized intersections, depending upon the proportion of left and right turns, the percentage of trucks and the bus stop condition. In other words, such major streets may carry daily volumes of from 2500 to 5000 vehicles, depending upon the traffic restrictions occurring in a particular area. Without signal control, such streets may carry up to 9000 vehicles per day. Speeds will vary from 20 miles per hour in restricted areas to 40 miles per hour in outlying districts.

Four-lane or multi-lane facilities of the arterial street type may be undivided or divided by a median or barrier strip. From a

safety standpoint, divided highways or streets are more than two times as safe as undivided multi-lane facilities. Increasing the width of the median increases the factor of safety directly. We urge that maximum consideration be given to the development of at least a 4-foot median on all major arterial streets reconstructed as multi-lane facilities and that, more desirably, a 16-foot or 20-foot median be used where right-of-way costs are not prohibitive.

Reverting to our discussion of four-lane undivided highways, the desirable width of such a facility is 68 feet. Four 12-foot lanes and two 10-foot parking lanes give adequate widths for minimum congestion. Lane widths may be reduced to 11 feet without critical traffic congestion problems. Building setbacks, of course, should include adequate space for sidewalks and a planting strip between the sidewalk and street.

Four-lane divided facilities in urban areas are usually designed with a curbed median or barrier strip and should be desirably 88 feet wide with a 16-foot median or 92 feet wide with a 20-foot median. The wide dimensions permit the development of separate lanes for left-turning movements and permit larger vehicles, trucks and busses, to operate with minimum inconvenience to other traffic.

Volumes on such multi-lane facilities will vary from 500 vehicles per lane with maximum interference in downtown areas to 1000 vehicles per lane with minimum interference in outlying areas. Equivalent annual daily traffic volumes range from 6000 to 20,000. The elimination of parking will increase the capacity of any facility.

Unfortunately, many of our forebears, in laying out our cities, did not have a Brigham Young present to give them counsel and advice. Salt Lake City is noted for its wide streets. Perhaps the credit should go out to that wise and numerous advisory council Mr. Young had at home.

In a city over 5000 population where an improvement of the existing highway problem is sought, we are faced with increasing the carrying capacity of the existing street system. This is a Bureau of Public Roads policy and regulation. In other words, the street or highway must be able to carry more cars upon completion of construction than it can carry with the existing cross-section or width.

We have three solutions to the problem: widening the existing street, converting parallel streets to one-way couplets, or eliminating parking lanes. In most Montana towns or cities, the existing building line prohibits the widening of city streets because of the excessive right-of-way costs. In such situations we must

resort to one-way streets to bring about the required increased capacity necessary for Federal Aid participation. Such a solution is often opposed by the local business man from a fear of isolation from the traffic stream. Many studies have been made of the effect of one-way streets upon business, and only in rare instances has a business been adversely affected by such a system. In most cases the converse is true; freedom of movement and the ease of access to the business area have increased business.

The one-way street has advantages and disadvantages, but it is generally acknowledged by engineers that the benefits outweigh the disadvantages in almost all instances.

The major advantages of one-way street operation are:

1. Increased traffic capacity in the range of 20 to 50 per cent.
2. Increased over-all travel speed, not necessarily that the road user drives very much faster, but that he encounters less congestion and delay.
3. A reduction of hazardous head-on types of accidents and other types of intersection conflicts.
4. Full utilization of an odd number of traffic lanes. On two-way streets, the odd lane is less efficient than the through lanes, and in some cases hazardous.
5. Simplified utilization of pavement for curb parking, since it is possible to permit parking on one side only of streets too narrow for such parking with two-way operation, or on wide streets to include parking on both sides. The increase in number of one-way through lanes reduces interference by vehicles parking or un-parking.
6. Change-over costs are less than those entailed in trying to develop a multi-lane facility. Right-of-way costs are usually negligible on reconstruction. Existing curb and sidewalks may usually be used in place.

What are the disadvantages? There are some:

1. Motorists must usually travel farther to reach certain locations.
2. One-way streets are confusing to some non-familiar drivers; however, with the widespread use of one-way streets today in most cities of any size, this point may almost be omitted.
3. Emergency vehicles may be occasionally blocked at intersections.

4. One-way operation on wide streets tends to increase weaving between lanes, which may be hazardous.
5. There may be a reduction in sight distance at cross streets due to vehicles in the left lane, either next to the curb or next to a left parking lane, having less corner sight distance to a vehicle approaching from the left on the cross street.
6. Additional signs are required, since one-way signs should be erected at every intersection.
7. Pedestrian crossings may be difficult or hazardous on streets with four or more traffic lanes in one direction, inasmuch as there is no median or refuge island in the center of the street.

One-way streets will be the only solution to major thoroughfare problems in many Montana cities, whether instituted as a part of a federal aid project or as part of over-all city-county planning to increase the capacity of the existing street system.

We have reviewed briefly some of the problems that face us in reconstructing major thoroughfares in our existing street system. What type of facility should we provide for in our future planning?

We bring to your attention three types of facilities that should be included in master plans for the future: the expressway, the freeway, and the parkway.

An *expressway* is a divided arterial highway for through traffic, with full or partial control of access and generally with grade separations at intersections. A significant distinction between a major street and an expressway is the distance between crossings and access connections. Whereas a major street may include numerous private driveways, an expressway has relatively few, if any. On a major street, connections are made at each connecting street; on an expressway such connections would be limited to every third or fourth street and other streets would be terminated. At present we have under way the reconstruction of a portion of US #10 on the western edge of Billings that can be considered an expressway.

The general geometric widths required for four-lane major streets or multi-lane facilities are required for expressways. In all cases the facility is divided with a median or barrier strip. Such facilities should be integrated as extensions of existing major streets in the master plan and considered for belt or peripheral highways.

Freeway, a term commonly used on the West Coast, is simply an expressway with full control of access and no intersections at

grade. All access is restricted to interchanges; cross roads are carried across by means of bridges. In Montana the freeway system is identical with the interstate system. In some rural areas we will have intersections at grade, but adjacent to all towns and cities access will be restricted to interchange points. Near the larger cities and through areas of high right-of-way cost, the freeway median or barrier strip will probably be narrowed to 16 feet in the interests of economy. In open rural areas, the median will be widened to 45 feet in the interest of safety at the higher level speeds. Right-of-way widths required in urban areas will vary from 200 to 300 feet in width, with much wider areas required for interchanges.

Planning of the freeways and the interchanges is proceeding slowly in Montana. It is a problem new to this state. Good planning in the location of the freeway and the location of the interchange areas will benefit each urban area touched. Congestion and delay, caused by heavy through movements of traffic on the major street system, will be removed. Around the larger cities, commuting will start up between adjacent interchanges, removing further causes of congestion and delay. Satellite communities near interchange areas will develop further as commuting becomes easier on the freeway system.

Planning of freeways, expressways, or major streets for future development should follow a series of definitive steps:

1. Determine the approximate traffic load along a general route suggested by the traffic-desire lines. In other words, determine the traffic volumes along a general location by an origin and destination study. Almost all cities in Montana have comparatively recent studies available for this purpose.
2. Select the type of highway, the number of lanes needed to accommodate the approximate traffic load, and the type of service to be provided. In other words, determine if a freeway, an expressway, or a major street is to be provided and the number of lanes required.
3. Assign traffic to alternate locations or routes.
4. Analyze and compare alternate routes for the selection of a preferred one by making cost estimates and analyzing the road user benefits of each route.

The *parkway* originated in New York, Connecticut, and New Jersey as a result of a peculiarity of their state laws regarding the use of state highway funds and control of access laws. They were

developed in those areas to provide access to state parks and recreation areas from the metropolitan area of New York City and are restricted to use by private vehicles only. At present there is no provision in the Montana laws for such facilities to be developed or preserved. Three excellent examples in Montana are the Black Otter Trail on the Rimrocks in Billings; the River Drive along the south bank of the Missouri in Great Falls to Giant Springs; and Le Grand Cannon Boulevard on the western edge of Helena. Some effort should be made legally to preserve and develop such facilities in and around our cities for the future. The general geometric characteristics of a parkway are governed by the expected traffic volume; it may be developed either as a two-lane or as a four-lane facility.

We have tried to present to you a few of the guides used in thoroughfare planning and construction. The future planning of parkways, expressways, freeways, or major streets is a problem, not only of the city-county planning board, but of your state agencies as well. It is the policy of the State Highway Commission to aid to the utmost each city-county planning board, with counsel and advice if desired, traffic counts, county maps, and information as to our future construction plans.

If the master plan of major thoroughfares is coordinated at all levels of governmental activity, expanded with the imagination required of a good city planner, balanced with good engineering, and governed by the practical viewpoints of the business man who has his community interest at heart, the end result will be to improve the health, safety, convenience, and welfare of each individual citizen, as required under law.

ZONING IN MONTANA

HOW LAND IS ZONED IN MONTANA

Laurence C. Gerckens

*Instructor, Department of Architecture, Montana State College;
member, Bozeman City-County Planning Board.*

I think it is fitting to mention here that we in the School of Architecture at Montana State College have undertaken preliminary study aimed toward the development of a program for the education of students in urban and regional planning, at an undergraduate level. We are attempting to develop a program which will allow students from diverse fields to receive a considerable amount of information concerning community planning and the planning process in order that they may become better-informed citizens, intelligent planning board members and, perhaps, professional community planners. This, I believe, will be of great benefit to the state if it comes about and I sincerely hope that it will. That's all I feel should be said at this time, as nothing along these lines has been officially approved so far.

The title of my subject, "How Land Is Zoned in Montana," is perhaps a bit misleading. I do not intend to concern myself this morning with a detailed report of the areas of land presently zoned for particular uses in our state, nor do I intend to explain the methodology by which a zoning plan is accomplished. I prefer to interpret this subject as placing prime emphasis on the understanding of the zoning concept. What is it? What was it in the past? How did it evolve? What are we working with at present? What are its advantages and disadvantages as presently utilized, and what lies ahead in its future development? This is a little on the "impractical" side perhaps, as I will give no tools which you can take to your cities and apply. However, I do feel that a better understanding of the zoning concept will reap future benefit, as the "impractical" of today is the practice of tomorrow if the ends justify a search for a practical means.

We often hear the terms "zoning" and "planning" used interchangeably, the inference being that they are synonymous. This is not true. "Planning" is the *process* by which a group arrives at an over-all scheme for systematic development aimed toward promoting the general interest. "Zoning," on the other hand, is the dedication of districts to particular uses and standards of occupancy and is designed to subserve the general interest. Zoning is a

planning tool; it is not an end in itself. Quite often I have heard municipal officials proudly state, "We have a zoning plan," the inference being that now all is well in the city. This reminds me of the carpenter who constantly bragged about the fine hammer he owned and through this bragging attained quite a reputation as a fine carpenter, until he built something with the hammer. The zoning tool is undoubtedly a good thing, but it is only as good as the plan which is to be implemented through its use, and the manner in which it is used. A fine hammer has never resulted in a fine structure when the user knew nothing about carpentry and the plans for the structure were of poor quality.

What is this tool—"zoning"? Zoning is a legal abridgment of the public's constitutional rights, the legality of which is provided for in the police powers of government. The police powers allow the abridgment of otherwise legal rights when such action is deemed necessary for the protection of the public health, safety, morals, or welfare. It is important that we, as members of planning boards, remember this, as this is the legal base of all zoning actions. If our zoning does not bear a direct relationship to one of these protections for which the police powers may be used, the zoning is an illegal exercise of governmental power. Zoning cannot be arbitrary; it cannot be merely the delineation of districts. Such delineation must be arrived at by reason and must be justifiably necessary for the attainment of one of these public protections. You may be asked to prove the necessity for your zoning provisions. If you cannot prove this your zoning is illegal.

What types of zoning are there? When we speak of zoning we normally think of districts restricted to various uses. This is "land use zoning." In addition to this type of zoning, we have what I term "physical disposition zoning." In this type of zoning, districts are also established but physical location and extent of development of structures are controlled rather than use. This type of zoning concerns itself with control of yards, building coverage, and the height of structures. The aim of this zoning is the provision of adequate light and air to the occupants of the structures. Most of our zoning today combines these two zoning types. Such a combination is termed "comprehensive zoning." Lastly, there is "performance zoning," of which we learned a little from the film shown last evening. Performance zoning controls characteristics rather than uses *per se*. This is the newest approach to zoning and has many advantages over comprehensive zoning. I will further explore this zoning type in a few moments. Most of us

tend to think of the zoning concept as being something new. I know that just a few years back it was looked upon as being radical. Zoning is a relative newcomer to the United States; we have had some form of zoning for *only* fifty to sixty years. In our state of Montana it certainly is new, having developed in just the past few years. It is interesting to note that the zoning concept has a tremendous historical heritage: the cities of the Mohen-jodaro culture in India were laid out with provision for caste districts prior to the year 2000 B.C., and the city of Baghdad built by the Caliph Al Mansur around 600 A.D. had a strict code regulating the location of various trades. Zoning and planning are really not as new as we think they are. We in the United States are merely witnessing a rebirth of these concepts.

Why did this rebirth come about? To answer this we must recall the conditions in America which accompanied our industrialization during the 1800's. This was a period of government non-intervention guided by the principle of the survival of the fittest. It was a period of cutthroat competition and lack of respect for the working man, who was viewed merely as another piece of productive machinery which was expendable. Toward the end of the nineteenth century the public health movement developed to protect the American home and the working man from the inhumanities of the non-intervention principle. It was at this time that the zoning tool was rediscovered and applied as a means of insuring the creation of communities which would provide at least the minimum amenities necessary for human life. Throughout the nineteenth century cities legislated against existing nuisances, such as smoky factories endangering the public health. At the turn of the century it was realized that elimination of nuisances after their development was insufficient and that what was needed was preventive actions. At that point, zoning as we know it today came into being as a preventive code. All of our zoning in the United States is based upon the prevention of future nuisance to the public through the control of location of use and extent of development.

Zoning was not always seen as being a legal exercise of the police powers of government. The legality of zoning was ascertained through a series of court cases which comprise our zoning and planning jurisprudence. In 1899 the case of *Attorney General v. Williams* (55 N.E. 77) came before the Massachusetts Supreme Court, which court upheld the legality of the establishment of height limitations on buildings. In 1909 the United States Supreme Court heard the case of *Welch v. Swasey* (214 U.S. 91) and upheld

the legality of varying height limitations in different districts in a municipality. Up to this time restrictions were uniform over the entire community. This case set the precedent for district zoning. In 1925 the California Supreme Court, in the case of *Miller v. Board of Public Works* (234 Pac. 381) ascertained the legality of the establishment of use districts. In 1926 the control of physical disposition, primarily developed on the East Coast, and the control of use location, developed on the West Coast, were combined to create comprehensive zoning as we know it today and this concept was tested in the Supreme Court of the United States. In that year the Supreme Court heard the case of *Village of Euclid v. Ambler* (272 U.S. 365) and held the comprehensive zoning concept to be constitutional. For all practical purposes the development of the zoning concept, the fashioning of the tool, ceased with this case. Up to that time the prime concern was that of developing a more effective tool. We have had thousands of zoning cases since 1926 that have gone to higher courts, but most have dealt with the administration and refinement of the comprehensive zoning tool rather than with the conceptual expansion of the tool. This comprehensive zoning concept, with which we are presently working in Montana and which has been in general practice since 1926, assumes that all uses of like category such as business, industry, and single family residences, have certain characteristics which make them incompatible with uses of other categories. It is therefore requisite that categories of uses must be separated for the protection of the public welfare. This is zoning as we have it today, the concept and its evolution.

For almost thirty-four years comprehensive zoning has been considered *the* planning tool. How good is the tool? Is the hammer doing its job? If not, perhaps we ought to consider using a crowbar instead. Comprehensive zoning as it is presently utilized assures the protection of construction investment against decrease due to the arrival of an incompatible neighboring use. In most cases the action of planning boards in the establishment of use districts is based upon this promised protection. Comprehensive zoning, through its physical disposition control, assures amenable physical living conditions. That is, it assures that adequate light and air will be available to the occupants of buildings. These are two of the major virtues of comprehensive zoning.

Now let's look at the other side of the picture. What are the faults of comprehensive zoning? If we are to use a tool we must know what is wrong with it as well as what is right with it. We must be aware of its limitations. First of all, use district zoning,

which is inherent in the comprehensive zoning concept, often *creates* more physical deterioration and urban blighting conditions than it prevents! This may be a difficult pill to swallow as it is usually assumed that use district zoning creates value, up-grades neighborhoods and prevents future problems. This is not necessarily so. There are at least fifteen different conditions under which the unskillful use of use district zoning can destroy more potential value and community amenities than it creates. Unfortunately time does not allow exposition of these conditions this morning. I trust it will suffice for this occasion if we are made aware of the fact that use district zoning is a dangerous tool. It is very similar to a medical injection, which is certainly good for bodily health *if* the right medicine is in the syringe and *if* it is injected properly. Secondly, use district designation often creates economic and ethnic ghettos in the community, segregating people to various quarters of the city. The significant point that I am making here is that use district zoning has serious faults of which we must be made aware. If you are presently zoning areas of your city, avail yourselves of the services of a planning consultant, someone who knows what he is doing. Such action certainly will not eliminate all the faults inherent in the use district designation system; but "do-it-yourself" community planning is very similar to "do-it-yourself" brain surgery, and the results can be similar. How good is our present zoning tool? It can be said that in providing protection for public health and safety the physical disposition controls of comprehensive zoning appear to be adequate. They are providing light and air, they are doing their job. Here the hammer is hitting true. But when the protection of the public welfare is considered, the usefulness of the comprehensive zoning tool can be seriously questioned.

Present ordinances which protect the public health and safety through the control of physical disposition are basically performance standard ordinances. The regulations are directly related to the type of occupancy and its needs. On the other hand, the use district delineation sections of present ordinances, those relating primarily to the protection of the general welfare, are not performance standard oriented. Rather, they are blanket condemnations of all uses in a particular category to the controls necessary to protect the remainder of the community from the worst characteristics of the lowest, most injurious use in that category. Under the present comprehensive zoning approach all commercial uses are considered as being identical with regard to their effect on other uses. This is not true. There are commercial

uses, and there are commercial uses, some of which are quite amenable with even the highest use category devised. This use district system requires that the clean research laboratory be located adjacent to the smoke-belching manufacturing plant, whereas it would actually be most amenably located for all concerned were it in a residential neighborhood.

The use district delineation aspect of comprehensive zoning is the area in which we will see conceptual development in the near future. The inadequacy of our present approach to take into consideration the characteristics of individual uses is becoming increasingly apparent. This is the area in which we shall see the fashioning of a new, badly needed planning tool. Study of this is already under way, as witnessed by the great concern in last evening's film with the development of industrial standards.

One possible avenue of future conceptual development is the elimination of use districts and the adoption of community standards for amenability of uses, in essence performance standards for the entire community. Under this system any use would be allowed in any area of the city so long as it met established standards for development which would assure amenability with its neighbors and could be integrated into the comprehensive plan. This has merit and I believe is worth the effort necessary to evaluate the concept and, if it proves fruitful, to make it a workable system.

Such conceptual expansion and study would require a great deal of research by competent planners. Last evening a distinguished speaker asked us to keep the theory of planning in the schools. This is fine and I am in hearty agreement, but unfortunately it isn't presently in the schools so that we might keep it there. At the present time there is virtually no research or development work being done in our Montana university system which will assist planning board members to solve the unique problems of our geographic area and of our state; at present there is very little planning research being accomplished in any university system in the United States.

At present we are attempting to apply a 1926 concept of community control, with many inadequacies, to 1959 communities. We have in this state, at present, an extension service primarily aimed at agriculture. Why shouldn't we also have an extension service in urbiculture? Why shouldn't we develop one central agency which would undertake needed urban research related to the common problems of a great many Montana communities? This information could then be made available to all the people of the state. At present a great many more Montanans live in cities than

on farms. Shall we give this urban majority the same research services that we have been granting to the rural minority? There are a great many studies which such an extension service could profitably undertake which would be beneficial to our communities. The first, of course, has already been mentioned: a reappraisal of use district delineation concepts and practices. Such a research organization might also undertake studies of zoning controls aimed at the preservation of natural beauty and good agricultural land, two natural qualities of our state. Such types of control will be the zoning of the future. Will Montana make a contribution to the development of these concepts and be among the first to enjoy their fruits, or will we sit back and wait for others to make these advances and benefit by them first? Will we be thirty years too late, thirty years behind the times forever? We were thirty years behind the rest of the country in adopting state enabling legislation. With the increases in urban population of the recent past and prospects of even greater increases in the future, we cannot afford to be too late.

BASIC DATA FOR GOOD ZONING

George Plescher

Director, Great Falls City-County Planning Board

Larry Gerckins has told you something of the importance of zoning. I would like to outline some of the steps in preparing a zoning ordinance and to dwell for a moment on some of the highlights of the steps which might be taken in the preparation of a zoning ordinance.

First of all, a city desiring to draft a zoning ordinance would have to know which of two types of ordinance is desired. One is the comprehensive ordinance which considers all of the land uses in the city and also future development of the city or the metropolitan area. The second type of ordinance may be divided into two sub-types. First is the interim ordinance which freezes land uses in the present status. This type of ordinance can be drafted rather quickly and in some cases may be justified, where a community is growing very rapidly and benefits of a zoning ordinance are sought immediately. Interim ordinances, however, are not generally advisable because many times they are arbitrary and more often than not, they are unconstitutional. The second sub-type of ordinance is a piecemeal ordinance which is sometimes used

in an attempt to hold an area out of a particularly undesirable use. The effect of this type of ordinance on the community and on the land use in the community is nearly the same as the interim ordinance. This piecemeal ordinance should be used only in certain extreme cases. Therefore, I would like to talk for just a few minutes about the comprehensive ordinance, which considers (1) base mapping and the existing land use in the community; (2) population distribution, density, and expected population growth; (3) street and traffic patterns; and (4) trends in the future development of the community.

Drafting the Land Use Map

To determine the existing land use pattern, a good base map must be drafted. A good base map is one that shows a total community correctly, including a correction of the map to show the changes in the size and shape of lots that have been made since the original map was drafted. Preparation of the base map can usually be done by the city engineer or in cooperation with the city engineer.

After the base map has been corrected and brought up to date, a determination should be made as to the number and types of land use, industrial, commercial, and residential. These three basic types of land use can then be further defined as light and heavy industry; retail, commercial, and neighborhood business; and single family residence, two family residence, three family, four family, and so on. In determining the number of categories which will be necessary, you must know something about your community. For instance, are light and heavy industries now present or do you expect industry to come into the community? If there are single family dwellings, two family dwellings, and three family dwellings now predominating perhaps you can classify all of those structures with three or more dwelling units in a category of multiple housing. In choosing the number of categories which will be tabulated in the land use plan, care should be taken that there are not too many categories, because this increases the cost of the survey and also increases the work. On the other hand, it is also imperative that all of the land uses be tabulated in such a manner that they can be readily used, and that the information accumulated in the land use survey be as complete as possible.

After the land use types have been categorized, a field survey of the community can be made to determine the land use. There are many ways of doing this, one of which is to go into the field

and survey each lot and each structure on the lot, tabulating this information on the base map by the use of a color code.

It is also important that all of the vacant land be shown accurately on the map. High school students after proper orientation can be given a portion of the base map to take into the field to tabulate existing land use. Another way of doing this, which is quite satisfactory, is to use the Sanborn Atlas which shows the uses of each of the properties within the city. However, in using the Sanborn Atlas, it is usually necessary to go into the field and verify some of the uses which are shown in the Atlas. After all of the land uses have been tabulated on a base map, you will then have a graphic description of the land use of the city.

The area or the amount of land in each of the various land use types is then calculated to determine the acreage in residential use, commercial use and industrial use. If there are a number of types of land use, such as single family dwellings, two family dwellings, and so forth, it may be desirable to find the acreage in each one of these uses. The land use map then gives not only a visual concept of the present structure of the city, but also the acreage in each of the various uses. It is especially important in categorizing the land uses to tabulate all of the vacant land in the city, because the utilization of the vacant land is one of the principal ways in which the city will grow and change. This is also the area upon which the zoning ordinance will be most effective because the land which is now in use cannot be changed immediately merely by enacting a zoning ordinance.

Neighborhood Units

After the land use map has been prepared, the city should be divided into neighborhood units. The number of units into which the city is divided will be determined largely by the size of the city and also by the various use areas within the city. These neighborhood units are essentially planning units which are established to aid in the more detailed study of the structure of the community. The city is such a large and complex unit that the study of the city all at once is nearly impossible. Therefore by dividing the city into the neighborhood units, each of these smaller subdivisions can be studied as a unit and all of these units put together into the composite whole after the study has been made. These neighborhood units should be delineated on the basis of the homogeneity of the area or by sharp changes in topography or by natural barriers such as rivers or by major thoroughfares.

Population

Another important factor in the drafting of a zoning ordinance is the distribution of the population throughout the city. You will want to know where the greatest concentrations of population are living and where the population is most scattered. This will be important in delineating the various residential zones. For example, if an area now has a high population density, it is probable that this area should continue at a high density. However, you may find that it would be better in the development of the city if the density of some areas was somewhat reduced. This information can be gotten from the United States Census of 1950 on their first count sheets. The population distribution in 1950, of course, is of little value unless it is up-dated. In up-dating this data, the records of the building inspector can be utilized to find the number of new dwelling units which have been constructed in each of the various parts of the city. The number of new dwelling units is then multiplied by the average size of family or household resulting in a population estimate for each of the areas. This will not give an accurate estimate of the population increase or decrease but it will give some idea as to the population distribution. This method can then be checked by estimating the population according to the number of electric meters and telephones which have been installed within the area.

Lot Areas, Side Yards, Rear Yards, and Front Yards

The current size and area of the lots in the community is an important factor in making the zoning ordinance. If the minimum size is too great, many of the lots within the community will be nonconforming and either zoned out of use or authorized as variances granted by the Board of Appeals. Many feel that the best solution is to zone lots in residential areas and business areas at a desirable minimum width and area, requiring persons with small nonconforming lots to go before the Board of Appeals. Where building on a small lot would cause a hardship for the adjoining property owners, these factors then could be determined on an individual basis making the zoning ordinance more workable.

Regulation of the front yards of the dwellings and the commercial structures prevents some of the dwellings from locating too close to the street thereby cutting off the view and light of adjacent property owners. Also requiring dwelling units to be set back from the property line opens up the street area sufficiently so that there is not an excessive accumulation of dust, smoke, and fumes in the street. We feel, in Great Falls, that 80 to 100 feet

should be allowed between the faces of the buildings on each side of the street.

Side yards are also important in sharing light and air for dwellings and commercial establishments. Here, again, various methods can be used. The most common method is to specify certain distances at which a dwelling must be set back from the side lot line. However, in the case of commercial establishments, industrial establishments, and apartment houses, which generally exceed the height of the residential dwellings, provisions can be made that the width of the side yard must be at least equal to the height of the building. In this case, it will allow light to penetrate the area at a 45 degree angle, thus giving assurance to the adjacent property owners of sufficient sunlight and air.

The maximum height to which buildings may be constructed is another important part of the zoning ordinance. Allowing residential structures to be built to excessive heights will increase the residential density of the area and this may be undesirable. Also, for commercial structures, building too high with too many offices or too many stores increases the number of people working in the building or the number of people going to and from the building, which can cause traffic and pedestrian congestion.

Another factor that should be taken into consideration is the maximum height at which the fire department can control fires. Any structure built above the maximum height for which fire department equipment can reach will have to be protected by an elaborate sprinkler system.

Topographic conditions are another important factor in drafting the zoning ordinance. Steep hillsides which may not be buildable for residential, commercial, or industrial structures should be put to some other use, such as recreation, or agriculture. Flood plain areas should also be delineated very carefully. Where a river runs through a city and a certain area is susceptible to flooding, the placing of buildings in a flood plain area is an encroachment into the bed of the river because the flood plain area is a part of the natural course of the river. The best solution, and one which many cities are accomplishing now, is not to allow any dwelling units to go into an area that is susceptible to flooding. This is based on the theory that the greater the encroachment into the river bed, the greater the losses become and the greater the problems.

You should also know where the local utility lines are, and their capacity. It would be sheer folly to have an industrial development in a location where sewer lines would be completely inade-

quate for industrial demand. To do this would actually zone the area out of use. This is especially true if the areas are zoned for industry when only commercial and residential establishments are now allowed in the area.

The capacity of streets to handle the various volumes of traffic is also an important consideration in drafting the zoning ordinance. This was elaborated on more fully this morning. For example, if you are zoning an area for commercial establishments which is a high traffic generator, then the streets designed for residential use must carry a high volume of traffic; this can be very detrimental to the values of the properties along these streets, leading in time to a slum condition.

I have covered only the high points of the studies which must be made in drafting a zoning ordinance. There are many other things which will come to mind, and the effectiveness and the validity of the zoning ordinance will depend largely upon the imagination of the person or persons who draft it.

FUNCTIONS OF PLANNING BOARDS AND BOARDS OF ADJUSTMENT IN MONTANA LAW

H. Cleveland Hall

Attorney; President, Great Falls City-County Planning Board

I am sure that all of you can understand from what has gone on this morning how simple are the obligations of the members of planning boards in the State of Montana. In other words, we have just started out with this Institute and I now find myself, and perhaps some others of you do the same, like the man that got on one of those freeways that we heard about this morning and drove seven hours without knowing how to get off. And sometimes that is about the way I feel.

Larry Gerckens and George Plescher have told you what zoning means; of course in the time that was allotted to them they only barely touched the subject. But the fact is that whether or not you members of city-county planning boards desire it or like it, you now constitute the zoning commissions of the various planning areas in the State of Montana over which you have control. That is very clear from the provisions of our statute which state that where a city council and a board of county commissioners are represented on a planning board the duties and powers of the zoning commission provided for in Section 11-2706, Revised Codes

of Montana 1947, shall be performed by the planning board on which such city and county are represented.

That same Chapter 246 of the Laws of 1957 also validates and carries on into effect the old zoning ordinances which were passed by various and sundry city councils, usually years and years ago. They do not fit modern standards. Many of them would not be upheld by any court in the state, and I believe (Chan Ettien will correct me if I am wrong) the zoning ordinance of Havre was, not too long ago, set aside by the district court as being void.

The first thing then, that a planning board must do is to go over with a fine-tooth comb the present zoning ordinance in force and effect in the particular city in which it has jurisdiction. I am sure if you do that you will reach a conclusion that a new zoning ordinance is imperative. And having done that, then you have got yourself some work. Gene Trotter tells me that the Billings Board, after much study, has finally gotten out its comprehensive ordinance but that it has not been submitted to the City Council or the Board of County Commissioners for approval. We in Great Falls have been working for the last six months on a comprehensive zoning ordinance. We hope it will be ready in another couple of months. It is not easy work and I am sure that all of us can tell Larry Gerckens that we will appreciate any help that anyone can give us.

The zoning ordinance is of course a part of the master plan. The first thing is to set up a land use plan and then upon the basis of that, to draw a zoning ordinance.

George Plescher and I have had some disagreements as to the boards of adjustment and their powers and duties. I don't know whether all of you understand what a board of adjustment is. It is provided for by the statutes of Montana in the same chapter which provides for the zoning commission. This statute provides that an appeal may be taken to the board of adjustment by any person aggrieved or by any officer, board, department, or bureau of the municipality affected by any decision of the administrative officer. The board of adjustment is appointed by the mayor and city council to hear such appeals. It is composed of five men.

The administrative officer who usually makes the decisions from which the appeal is taken is the building inspector, who is endeavoring to follow the zoning ordinance in granting or withholding building permits. Now there must first be a decision by some officer or board. This might be the city-county planning board as well as the building inspector. The result of that appeal may in some measure upset the plans of the planning board.

There has been some question therefore as to whether these boards of adjustment should be continued. The answer to that is found in a decision of the Supreme Court of Montana in a case which arose in the city of Great Falls and which had to do with the rights and powers of the Board of Adjustment. (*Freeman v. Board of Adjustment, et al.*, 97 Mont. 342). The case was decided back in the year 1934, but it still is a good law as far as the State of Montana is concerned. In that case it was suggested by the plaintiff that the work of a board of adjustment was not constitutional. The Supreme Court of Montana said, and I think this is very important to remember, that the provision for a board of adjustment or similar fact-finding body vested with broad general powers is *important to the validity of the zoning ordinance*, and of the statute under which it was enacted. In the absence of such a board vested with power to prevent inequalities and injustices which might otherwise result from a strict enforcement of the zoning ordinance, there would be grave doubts as to the constitutionality of the ordinance and the statute under which it was enacted.

In other words, it is up to the city-county planning boards to get along with the boards of adjustment which have been appointed by the city council. To do otherwise would bring into question the constitutionality of any zoning ordinance which might be passed by the council and approved by the board of county commissioners. There is an old saying that if you can't lick them join them. The thing to do, then, is to get along with your board of adjustment.

One further thing I would like to say, and that is: I think you will find in most of the counties that the boards of commissioners have not appointed a board of adjustment. By all means they should do so at as early a date as possible to take care of possible appeals relative to property outside of the city limits but within the planning board's area of jurisdiction. That is one thing that you should see to as soon as you can and, in any event, very shortly after you have presented your zoning ordinance for adoption.

A SURVEY OF MUNICIPAL ZONING ORDINANCES IN MONTANA

Ellis Waldron

*Acting Director, Bureau of Government Research, and
Dean of the Graduate School, Montana State University*

Two years ago the Director of the Bureau of Government Research made a little survey of the status of zoning ordinances in Montana cities, and when the program for this Institute was put together it was suggested that the Bureau might bring this survey up to date. With the generous assistance of Al Klingler of the Montana Municipal League we ran another "quickie" mail survey to see if we could get more complete information. While the results are not complete, they are rather better than we expected to get on short notice. According to the 1950 census there are 53 cities and 71 towns in the state. By combining the overlapping information in the two surveys we got some sort of reply from 115 of these municipalities, representing a 92 per cent return.

Perhaps it should be explained that I am serving as acting director of the Bureau only until we can secure the services of someone who knows more than I do about such matters as zoning. I knew little enough to suppose that zoning ordinances needed no definition in our questionnaire. But we received replies from some small towns where there was uncertainty whether fire and building ordinances were zoning ordinances. We took some liberty with these, and considered zoning ordinances to involve some kind of use classification rather than construction standards.

One more safeguard may be in order. A survey like this one probably is more or less correct except for your own city or town.

There are eight first-class cities and we received returns from all of them. Six of the eight first-class cities have zoning ordinances, and Butte and Anaconda advise that they are preparing ordinances. So 75 per cent of the first-class cities have zoning ordinances, and the others are in process of enacting ordinances.

There are five second-class cities, with population from 5,000 to 10,000, and all of them have zoning ordinances. We had returns from all of them.

Approximately one-half of the third-class cities, population from 1,000 to 5,000, report zoning ordinances. Then there is a sharp drop among the towns, where six of the 71 report zoning ordinances for a coverage of less than ten per cent.

It was a bit difficult to see evidence of movement from the 1957

survey to the present returns. We excluded the development of city-county planning boards here. There were these signs of change: Butte is preparing an ordinance where none was reported two years ago. Glendive among the second-class cities is revising its ordinance. White Sulphur Springs among the third-class cities reports it is considering adoption of zoning regulations. Among the towns, Ekalaka has adopted an ordinance but does not seem to have created a commission to implement it. There is discussion of an ordinance in Manhattan, and Valier adopted an ordinance in January, 1958, which really appears to be a fire regulation. There is discussion of an ordinance in Cascade, and Westby reported that it had an ordinance two years ago, but now seems to have none.

The Bureau now has a substantial set of ordinances in hand, and more are still coming in.

We have had time thus far to examine them only casually, but they appear to represent the traditional land-use sort of regulation. If a comparative analysis of these ordinances would be useful to this group the Bureau would be happy to undertake the project and let you know what we discover.

LUNCHEON SESSION

LONG RANGE PLANNING FOR INDUSTRIAL DEVELOPMENT

David D. Moore

*Manager, Economics Division, Battelle Memorial Institute,
Columbus, Ohio; Coordinator of Economic Study for
Alaska International Rail and Highway Commission*

Until now, much of the location of industry has been by chance and the peculiarities of nature, and in the case of the extractive industries this must always be so. But among manufacturing industry there is a growing appreciation of the advantages that can be secured by location in one community or region as opposed to another.

The impact of research and development and the technological changes resulting therefrom have made a more careful appraisal of plant location desirable, if not mandatory. Research and development today are big business. Based primarily on National Science Foundation estimates, the research and development expenditures for 1959 will be in the neighborhood of \$10 billion. If the applications for this research and development effort are to be realized fully, considerable and continuing changes in technical require-

ments and industrial plant location, types, and design must be anticipated. Economic geography and economics are playing an increasingly important role in this regard.

Progressive business men, governmental leaders, industrialists, professionals, and labor are all becoming more and more aware of the economic needs of their region and are organizing to do something about the problems.

In the past, far too many communities have restricted their thinking to the city limits. Too much needless competition has existed among neighboring communities in their efforts to attract the same company—often with disastrous results for all.

There is, however, a growing awareness that consideration of a region as a unit can work to the mutual advantage of the communities situated therein. A comprehensive and objective analysis of the strengths and weaknesses of the region can and should provide the necessary framework on which to develop a continuing and orderly pattern of growth—growth based on sound technological and economic patterns rather than by chance.

In a sense the pattern for planning of regional growth can be likened to the planning of research and development. Paraphrasing a paragraph on research planning from a recent article by W. L. Swager of Battelle Memorial Institute:

“The basic foundation of regional industrial development planning necessarily is an estimate of the area’s future without or with varying degrees of technical, economic and other professional effort. Like many difficult problems, this one is deceptively simple to state. Somehow the many factors influencing the future health of the region (such as the strength of the whole economy, shifts in markets and marketing, rising labor costs, and competitive pricing) must be assessed simultaneously with the impacts of changing technology and economic climate. Many businessmen who develop a feel for business situations and economic factors are puzzled when faced with changing technologies. Similarly, most men whose training and experience give them the basic information and feeling for technical and governmental matters have no inclination for business and economics. The planning director or group leader has the responsibility of presenting to his community and region plans and programs that make sense from both points of view.”

Again, as with research planning, area development planning can be divided into two basic categories:

Offensive planning—to develop new industries and activities

Defensive planning—to secure and maintain the best possible continuing relations with present industry

Let me elaborate these points somewhat. Examples of defensive planning (which ordinarily should comprise the larger share of effort) are as follows:

- to maintain the region's share of the market for its products
- to maintain a business and labor climate conducive to harmonious, continuing relations within industry
- to provide and maintain an environment for desirable living
- to provide adequate financial backing to support and extend present industries
- to maintain modern up-to-date city and regional planning, alive to the changing needs of the community and region
- to anticipate the time when declining activities in one field must be offset, and be prepared to offer a desirable environment for suitable replacement industry.

Examples of offensive planning might include the following:

- to determine needs of new industries that can use present or potential assets of the area to good advantage
- to determine liabilities affecting location of desirable industry in the area, and take steps to correct deficiencies
- to determine and develop industries that will offset cyclical variations in the region's economy
- to determine how best to secure vertical integration of industries utilizing the resources of the area
- to exploit the assets of the region through aggressive, objective, and unified action

I am sure that with a little time and effort many other examples of offensive and defensive planning objectives could be jotted down. Further, elaboration of many of the points just mentioned could be full-scale subjects for discussion in themselves.

The basic elements of planning can be broken down into six categories:

- A) Definition of regional needs
- B) Translation to technical objectives (offensive and defensive)
- C) Development of alternative approaches
- D) Evaluation of alternative approaches
- E) Selection of approach
- F) Budgeting

The development, evaluation, and selection of the approach or approaches to use in long-range planning should be done with careful attention. It is the skill, foresight, and imagination used here that can result in a glowingly successful result, a satisfactory

solution with reasonable and desirable over-all growth in the region, or, at the worst, a negative return. Proper weightings of risk versus potential returns must be made if the long-range solvency of the region is to be advanced. Regions, like corporations, have a limit to their capital and the plans they attempt to develop should be gauged to their competency and size. A densely populated area with large capital resources can embark on a program involving a risk element that is beyond the capacity of a rural or sparsely settled region. Each, however, has its problems, and the approaches used must be tailored to the individual region's needs and resources.

To be successful in any planning operation adequate budgets must be made available to accomplish the planning tasks—and, as mentioned previously, adequate funds must be available to exploit the findings in the planning stage or the results will be wasted.

Finally, and most important, is the action that the region takes to develop and maintain its long-range plans and objectives. Full time, continuing, and aggressive action is necessary if the full realization of the planning efforts is to be secured.

AFTERNOON SESSION

SUBDIVISION CONTROL IN MONTANA

HOW URBAN LAND IS CONTROLLED IN MONTANA

Vernon R. Peterson

Missoula County Surveyor; President, Missoula City-County Planning Board

Since this panel is to be concerned with subdivision and control of urban land in Montana, let us divide the area of control into three categories:

First, under the present statutes, the areas which can be controlled by the county are those in which zoning districts have been established, at the request of the residents. These zoning districts are voluntary districts, and they can be instituted upon the petition of at least 60% of the freeholders in an area of not less than 40 acres.

The procedure is relatively simple, and the methods are prescribed by statute. The freeholders must submit a petition setting forth the type or classification of zoning that is desired. When the petition is received, public notice is given and hearings are held; the zoning commission—made up of the three county commissioners, the county surveyor and the county assessor—decides whether the zoning district shall be established.

Once a zoning district has been established, the county zoning commission is the administrative and regulatory body. However, the freeholders themselves determine the kind of regulations they wish imposed when they set up their districts, and these districts and their regulations may be as simple or as elaborate as the people may desire.

A second control over these lands is, of course, maintained by the State Health Department. Since Mr. Brinck is here and will undoubtedly go over these regulations in some detail, I will merely mention this as another area of control.

The third area of control, the involuntary, is probably the most important, insofar as the people themselves are concerned. These are the controls set up by law for the areas around cities.

When it became necessary to determine ownership of lands by some less cumbersome means than by metes and bounds—especially around cities and in areas of concentrated population—the General Land Office, or the Bureau of Land Management, divided the

townships into sections in order to eliminate these unwieldy land descriptions. In order to effect this change, certain laws were enacted that applied to the subdivisions in such areas.

The laws of which I speak did result in the simplification of land descriptions. The technical part of the law, comprising about 80% of these statutes, goes into detail and very thoroughly sets forth the specific requirements for the following: the types of monuments and how they are to be placed; the rules and regulations governing plats—the plats themselves, the type of paper on which they are to be made, and the angles, bearings, and distances that must be specified.

It is the remaining 20% of the law that concerns something with which we are now confronted and which is giving us most of our problems. This is where the law merely outlines certain procedures, but does not elaborate upon them, and where, in the interests of conformity and continuity, we have found that we must have some method to handle specific situations when the law itself is not explicit.

The statute says that streets and alleys must be continuous and must conform with the streets and alleys of adjoining additions. This means that we cannot subdivide into blocks and lots in such a way as to hinder the road system that is already established.

The law also describes parks and playgrounds; and, although it prescribes that 1/9 of any area of over 20 acres, and 1/12 of any area under 20 acres, must be given over to parks, it leaves to the discretion of the county commissioners where these parks may be.

These regulations are followed. But as we have progressed, our modern urban areas often developed along different trends than were envisioned years ago. We find, now, that these provisions are not entirely adequate for our present purposes.

For instance, there are provisions in the statutes that orchard tracts and vineyard tracts of 10 acres or less can be platted without any consideration being given to parks; and the statutes do not make any provision for schools. Some of our communities have considerable areas that are subdivided in these so-called orchard and vineyard tracts; in some cases these areas cover several square miles. In such areas little or no provision has been made for park or school sites. The school districts were left to shift for themselves and to purchase land anywhere they could.

Difficulties arising out of the limitations of the statutes must be taken into consideration; and when these difficulties arise, they must be handled by other means over and beyond the existing statutes.

A county zoning commission cannot enter into these areas unless and until it has been requested to do so through a petition from the freeholders. Yet, some control should be exercised before these areas have been built up for residential or for other uses without provision ever having been made for parks and for schools.

On the other hand, under the law passed in 1957 which created the city-county planning boards, the existing statutes can be supplemented by these administrative boards within their own jurisdictional limits. The boards will, of course, adhere strictly to the law, but they will also be in a position to supplement the law in those instances where the statute has not made explicit provisions.

For instance, when these orchard tracts lie within the jurisdictional area of a city-county planning board, the board may insist that provisions be made for parks and for school sites, and made at the time these tracts are first broken up into building sites. At present, without the jurisdiction of a board, they may still be subdivided without any provision for such desirable community facilities unless, of course, the personal responsibility of the developer or of the engineers should prompt them to set aside such areas.

Although the entire jurisdictional area will lie under the same rules and regulations, there will, of course, be different requirements for residential, commercial, industrial, or other classifications. Certainly, there will be different lot widths desirable for residential areas than for commercial areas or industrial park tracts; and certainly, the width of arterials will be greater than that of our residential streets. Widths of rights-of-way will vary for an arterial and for a marginal access road along a newly developed area.

But an integrated and inclusive plan for a jurisdictional area can provide both for these arterial streets and for the marginal access roads. Both must be taken into consideration in order to work to the benefit of all the people within the area.

Good planning works to the benefit of the developer as well as of the persons buying and building on the land. However, at present our laws do not differentiate or elaborate on the new land use conditions. We must have some other means of regulating the building of the areas that we may desire to build in the future; and the responsibility of regulation passes into the hands of those of you who are in the city-county planning field.

Probably four-fifths of our urban population live within the cities, and probably one-fifth of these people live in the outlying areas near the cities. (Such a division would, of course, vary with the town.)

Under the present situation, we could have two houses, only thirty feet apart, one just inside the city limits and one just outside; one regulated, one not regulated. You could not tell, by driving down the street and looking at these houses, that a boundary line ran between them, nor that the one lying just inside the city limits was subject to certain regulations and that the other was not subject to any regulations.

These houses are the same, the street is the same, the people living in the houses may even work at the same place; but one of these houses comes under the zoning regulations of the city and the other one does not. Cities do have the power to make ordinances and they can control the subdivision of land within the city limits. That is not true in the urban area just outside the city limits.

Those who will follow me on this panel will go into the details of the methods of supplemental regulation. However, I would like to leave you with one important thought. While we do have good subdivision regulations on the books, these regulations must be supplemented, to take care of the now developing areas around those areas already established. We must do this with full consideration of the modern way of living and full realization of the new developmental trends of this day and age.

GOOD SUBDIVISION DESIGN

Robert W. Christensen

Chief Land Planner, Federal Housing Administration, Seattle

Too many of our growing communities today are ill-equipped to contend successfully with their expansion and development problems. Well-conceived and well-administered subdivision regulations are a must for the community that would guide its growth toward better living conditions and standards. When we consider that approximately 400 square miles of new subdivisions are being added each year to our communities throughout the United States the importance of sound development guidance cannot be minimized. The new subdivision is a permanent and well-nigh ineradicable mark on the face of the community.

In my opinion the standards of, or guides to, design are the heart and soul of subdivision regulations. From them can come the ultimate form of the residential community.

I would like to speak on subdivision design elements from two major aspects, namely economy and liveability. The benefits to be derived from these aspects can accrue equally to the community,

the developer, and the homeowner. Perhaps the most obvious element of a subdivision is the road pattern. The initial cost of development is reduced substantially by a simple pattern that is adapted to the land. A complicated and extravagant street layout will increase costs for clearing, grading and drainage, and may be forever a liability on the financial resources of the community. It may also result in excessive lot improvement and maintenance costs for homeowners. If the road pattern exceeds 20 per cent of the total subdivision area, maximum economy is impossible, since too much property is removed from the tax rolls. On the other hand, if the road pattern is well adjusted to existing topography, storm drainage is facilitated, earth cuts and fills are held to a minimum, and access to abutting lots is easy and convenient. Few if any portions of the subdivision will be unusable, and tree cover and other natural features such as water courses can be preserved. These savings in development costs can be reflected in lower housing costs.

The road pattern must be related properly to adjacent areas as well as to existing topography. For example, roads should extend to abutting undeveloped land so that no land-locked areas are left to complicate future development. Dead-end streets should be avoided, and existing or planned traffic arterials must not be impeded or terminated. Above all, the street pattern must complement the general community plan, if any, and exhibit a maximum safety potential for traffic. It must also provide for convenient access to and circulation within the development.

Right-of-way and pavement widths should be sized to the planned use just as sewer lines are sized for anticipated volume of sewerage. A minor residential street should, and can be expected, to carry far less traffic than a street having a long and continuous alignment between major community facilities or service areas. The widths should be no greater than necessary to accommodate needed utilities and the traffic generated by the abutting residences. Arterial and collector streets on the other hand have a different primary function, i.e., that of carrying traffic. Access to abutting property is secondary, and in fact may best be avoided if the anticipated volume of traffic warrants. Therefore, their widths should be greater than for residential streets. Most commonly used widths are 50', 60' and 80' respectively for residential, collector and arterial rights-of-way.

Cul-de-sac and loop streets should be used where through streets would be impractical and where access to buildable sites would be otherwise impossible. The cul-de-sac road should terminate in

a generous turnaround and should not exceed 500 to 600 feet in length. If longer, circulation and access are impaired.

Current appeal, liveability and long-term stability are indicated for the subdivision in which the following design objectives have been met:

1. Traffic hazards minimized.
 - a) Four-way intersections avoided.
 - b) All necessary intersections of the "T" or modified "T" type for the least number of collision points.
 - c) A minimum number of all types of intersections— increased block lengths (to 1200 or 1400 feet) and few cross streets.
 - d) Minor streets aligned to discourage thru traffic.
 - e) Loop streets, culs-de-sac, and a non-continuous limited access type pattern used in preference to the gridiron arrangement.
 - f) Street jogs and half-streets eliminated or avoided.
2. Lots having appropriate size, outline and orientation.
 - a) Equal to or in excess of zoning code minimums.
 - b) Appropriate for probable size and shape of house to be built thereon, and to the proposed method of sewage disposal.
 - c) Reverse orientation to adverse land uses abutting; i.e., arterials, railroads, shopping centers, cemeteries, etc.
 - d) Increased depths for above normal space separation and/or screening from adverse abutting uses.
 - e) Increased width for steep side slopes to minimize need for extra fill, retaining walls, etc., and for easy access and maintenance.
 - f) Excessive depths avoided where upkeep would be burdensome; i.e., no natural cover and extra area difficult to use.
3. Utilities and community facilities appropriate to needs.
 - a) Park, church, and school sites of adequate size and convenient location. Montana is forward-thinking with respect to park area allocations.
 - b) Utilities located in public rights-of-way or in properly and legally established easements.
 - c) Street improvements appropriate to contemplated use and anticipated maintenance.
 - d) Shopping and recreation areas with adequate off-street parking space, convenient access, and in accordance with provisions of local ordinances.
4. Overall attractiveness built-in.
 - a) Monotony avoided by variety in street alignment both

horizontally and vertically.

- b) Front setbacks varied by increased front yard depth.
- c) Privacy insured by fencing, screening, etc.
- d) Trees and natural features preserved or street trees and other landscaping incorporated.
- e) Extremes in architectural styles avoided.

The initial design of the subdivision determines to a large extent the degree to which economy and liveability are incorporated. The quality and extent of subsequent improvements also has an important influence on these aspects of the subdivision. Subdivision regulations can assist materially in bringing about highest possible land uses, and in affording protection against neighborhood deterioration and blight. Properly drawn design and improvement standards tend to prevent excessive maintenance costs while providing strong guidance for sound residential development.

The following documents may be of interest and use to you as planning officials:

SUGGESTED LAND SUBDIVISION REGULATIONS.

Housing and Home Finance Agency, Washington, D.C.
BUILDING TRAFFIC SAFETY INTO RESIDENTIAL DEVELOPMENTS. National Committee for Traffic Safety, 20 N. Wacker Drive, Chicago 6, Illinois.

EASEMENT PLANNING FOR UTILITY SERVICES. Michigan Bell Telephone Company and the Detroit Edison Company.

SUBDIVIDING FOR TRAFFIC SAFETY. Harold Marks, *Traffic Quarterly*, July, 1957.

NEIGHBORHOOD STANDARDS. FHA Land Planning Bulletin #3.

In conclusion—a word of praise and appreciation to all planning commissioners doing a sometimes thankless, but always important job. Through their donations of time and effort, our communities are better places in which to live and will continue to grow in orderly fashion.

UTILITIES IN NEW SUBDIVISIONS

C. W. Brinck

Director, Division of Environmental Sanitation, Montana State Board of Health.

The opportunity to meet before your group at your first meeting is greatly appreciated. It was just fifty years ago that the first

meeting of this type was held in Washington, D.C., in 1909. With our expanding population and the desire for people to have more living space, the need for proper planning for subdivisions has become greater until today the situation is probably best described in *Fortune Magazine*, December, 1958 which states: "Politics, apathy and the headlong rush to suburbia have made water and sewerage facilities the greatest single deficiency in the U. S. Public Works. And the way things are going, we may not catch up for forty years."

While my talk is shown as "Utilities in New Subdivisions," the discussion will be limited to water and sewage, with which I am familiar.

Fourteen miles southwest of downtown St. Louis is a subdivision of \$30,000 to \$50,000 homes called Ronnie Country Club Acres. Its twenty-five families are happy in homes in such a desirable neighborhood until it rains. "Then," says one despondent resident, "the septic tanks overflow and sewage lies in the yards or runs down the street." People of Ronnie Country Club Acres have spent a lot of money trying to rectify the condition by improving drainage or putting in storm drains. The owner of one of the houses secretly installed a pipe that takes any overflow away from his septic tank and discharges it alongside the state highway. But none of these expedients has solved the problem. It's still unpleasant when it rains on Ronnie Country Club Acres.

The situation described for St. Louis has been duplicated in Montana, including situations that are similar in Missoula, Kalispell, Libby, Shelby, Billings, Glasgow, Laurel, and Miles City, to name a few of the places. The problems arise with private sewer systems where septic tanks and cesspools are used. Septic tanks are fine when there is plenty of land and if the soil is suitable for septic tanks. Cesspools are not recommended under any conditions. The problem with septic tanks has been that in many places they operated satisfactorily for a few years; then as the pores in the soil became clogged with grease and soap film the liquid forced its way to the surface, running down streets and alleys into neighbor's yards, children played in it, and flies bred in it. In one situation the septic tank effluent drained into a neighbor's basement where he pumped it for irrigating and fertilizing the lawn, so that his small children could not play on their own lawn.

We have also had problems with wells. Most problems with privately owned and operated wells are improper construction or improper sewage disposal in the neighborhood. Last year synthetic detergents in individual domestic wells were found in Suffolk County, Long Island, New York. This caused the county health

department to halt temporarily the completion of new wells in several housing developments. More restrictive rules were imposed on well locations and depths of wells. The detergents were traced to seepage from cesspools and septic tanks. In one subdivision in this area sixty of one hundred and eighty-six wells showed the presence of detergents. When the detergents are present, bacteria may also be present.

In Montana it has been necessary for the Federal Housing Administration to refuse to insure home loans in two districts adjacent to Montana municipalities because of ground water being contaminated with sewage and affecting wells in the area. In another situation a sewage-contaminated irrigation ditch contaminated the ground water supply in adjoining wells.

These few examples are given to illustrate the point that we do have problems in Montana. What caused these problems? The subdividers, the people moving to the suburbs, or the lack of governmental control? All may be involved, but it will be the home owner that will pay in the long run, if he has the money. If he doesn't, someone will have to pay the cost, whether it is the financing agency or the subdivider. Usually, however, it will be the person who finally settles in the area. When the developer installs a community system, the property owner can expect to pay a higher price for these services than for those originally obtained in his large community that probably installed these utilities before the great increases experienced during the past fifteen years. Subdividers attempting to develop an area desire to keep their capital investment to a minimum since they have little assurance at the beginning whether or not the public will accept their subdivision; they are faced with the problem of individual water and sewer facilities or community facilities.

Both the subdivider and buyer of property would be in a much better position if we had effectual control by the proper government agency to assure the buyer reasonable expectancy of satisfactory operation of the water and sewer facility at his new building site. From the subdivider's standpoint, if an area should not be subdivided, he would learn this in the beginning. All subdividers would be working under the same rules and regulations and the subdivider who was trying to meet his obligations honestly would not be placed in unfair competition with the fly-by-night operator who would leave the country as soon as he had reaped his harvest.

Many subdividers are undertaking subdivisions without obtaining adequate counsel concerning water and sewer facilities. San-

itary engineers in general have found that an acre or more of ground is necessary when a dwelling is to have its own well and septic tank. Where there are smaller plots of ground, community water and sewer facilities become most advantageous to the builder and home owner. It is necessary that these people be sold on the desirability of such facilities, since frequently they do cost slightly more than the individual facility. But there is the assurance that they will continue to operate through the years protecting the health of the community and making the community a desirable place to live, eliminating the problems that were described earlier in this discussion, and also the odor of septic tanks and sewage that so often is noticeable on warm summer evenings. If proper water and sewage facilities cannot be provided an area, it is senseless to consider the development of a community; otherwise slums for the not too distant future are being created.

The problems mentioned above are not insurmountable, if there is proper planning and if the persons doing the planning have courage and foresight to prevent an area from building up helter-skelter. An area must be considered as a whole and not as splintered sections. Drainage areas must be considered rather than political subdivisions. Planning should include the municipality and its surrounding area. Planning is not enough without proper zoning and land use agreements. Public health officials and sanitary engineers consider it most desirable for the long term arrangement to have a central municipality supply water and sewer facilities for the suburbs. When this is done proper operation for these facilities is provided without setting up another group that must learn techniques of operation and the responsibilities which are assumed when operating these utilities.

In order to supply community facilities for the suburb, there are four methods that the developer might consider:

1. Annexing the subdivision to the adjoining municipality.
2. The development of a metropolitan sanitary district that will include both the municipality and the suburban and rural area, to operate these facilities for the entire district.
3. A rural improvement district which may be established by the county commissioners and is operated under their direction. This district may be taxed for the facilities by the county commissioners.
4. A corporation in which each property owner becomes a shareholder and which as a legal entity can employ persons to maintain the systems.

Another problem facing the subdivider developing community

facilities is: what should he do if his area is sufficiently large to handle five hundred dwellings ultimately, but he sees little likelihood that there will be more than fifty dwellings in the immediate future. The qualified sanitary engineer can develop a flexible program which will provide sewage treatment facilities for the smaller number of dwellings and then make it possible to enlarge the plant to serve a larger number of dwellings without throwing away the initial capital investment. This requires planning and foresight. Lagoons readily fit into a stage construction plan. In some places, small sewage treatment plant facilities have been built with the understanding that when the municipal trunk sewer became available, the subdivision would be connected to the trunk sewer. In order to insure that this would be done, the land developer collects the estimated amount of money necessary for connecting to the trunk sewer and places this money in escrow. In the Kansas City area when property is sold a certain sum is placed in escrow, usually approximately \$200 per dwelling. Between the time that the trunk sewer is installed and the time that persons first build in the area, proper maintenance must be had for the subdivision utilities.

We have problems in Montana today with suburban water and sewer facilities. These problems will continue unless we work together to solve them. Proper legislation is required. If we cannot provide proper water and sewer facilities for a given area, then that area should not be developed. At the present time your Montana State Board of Health can offer only consultation to you, to the subdivider, and to the money lenders that may be interested. We do not think there should be a continuation of the problem where an individual will drill a well in front of his house, have a properly constructed septic tank in the rear, and then have a neighbor construct his septic tank but a few feet from his already drilled well. This endangers the health and well-being of persons living in the area; and the investment that such persons may have may be lost, unless the situation can be changed. We can change it by proper planning and with proper legislation.

INTEGRATING MOBILE HOMES INTO THE COMMUNITY

TRAILERS BRING PROBLEMS

William H. Swanberg
Mayor, Great Falls

I want to thank those who are responsible for inviting me here this afternoon. It is a privilege to speak about a subject which has vexed the city of Great Falls, and to have a chance to talk about the problem outside our city limits. I wish to state at the beginning that I am not a student of this problem; I haven't made any textbook studies of it; I haven't made any field surveys of it outside of Great Falls. The experience I have gained has been strictly from Great Falls, but I do believe that the problems we have had there are sufficiently general that I can make a few observations of general validity. Most of us think of mobile homes, when we think of them at all, as those doggone box cars that move ahead of us on the highway blocking traffic on hills. We think the average buyer of the mobile home buys it because of its mobility; it can be picked up and transported to a new location. If we carry our thoughts further we conclude that the people who buy them are probably construction workers whose jobs take them from place to place, and to some extent that is true; but that is not the full story.

It has been my observation that the average mobile home owner didn't even have mobility in mind when he bought the mobile home. We have a court in Great Falls, a rather large one; I checked with the owner of that court just a few days ago and he informed me that a fairly large percentage of the mobile homes in that court have been there for five years or longer, and that from his personal knowledge this was not unusual. If people don't buy them for their mobility value, why do they buy them? The principal reason, I think, is financial. The average permanent home being constructed in Great Falls today costs around \$13,000. If the buyer wants to qualify for an FHA loan he will have to have an income of at least \$400 a month to swing it; these are rough and ready figures but I think that those of you here who are FHA experts will substantially agree with me. There are many people in Great Falls who don't make \$400 a month; they don't make anywhere near \$400, and yet they want a place to live. And this is where the trailer comes in, because the average

new trailer in Great Falls, which costs \$6500, can be purchased for 25% down, about \$1600, and its monthly payment is \$80. But my friend again informs me that the average person buying a trailer for this housing that I am talking about, and not for its mobility value, starts out with a second-hand trailer. He can buy this for \$3000, a down payment of 20%, which is \$600, and his monthly payment runs, for six or seven years, at about \$50 or \$60 per month. This is one of the big reasons why mobile homes are so popular. This is one of the big reasons Great Falls has so many of them. At the last count I believe we had 2300 trailers in and around Great Falls, and I am quite positive that the number has gone up since that count was made last fall. The big reason they buy them is not their mobility but the financial reason.

Finally there is a third reason why people buy trailer homes, and here we are getting a little bit warm. I refer to the purchase that is made by the do-it-yourself addict. He buys the mobile home, moves it onto a low-cost lot, with the dream that he is going to build a house later on to supplant his mobile home. When we get into this a little further I have some pictures that I will pass around and comment upon. In talking about prices we haven't discussed the cost of the lot. I think it should be evident to all of you that if cost and low income form the rationale behind many of these purchases you are not going to find these trailers on a high-cost lot. If they can't afford to buy a house the chances are they can't afford to buy the lot either, and most of the lots in Great Falls are priced out of the reach of the average low income person. So if you have an area in your city where low-cost residential lots are available, and if your zoning allows the mobile home to move onto such a lot, you have a situation tailor-made for the mobile home. We have such an area in Great Falls, and the rest of my talk is going to be centered on this area, known as the Bloomingdale Addition. It came into being eight or nine years ago. You can buy a lot there for \$50 down and \$25 a month. You can buy your mobile home second hand and move it onto the lot and if you are this do-it-yourself addict whom I mentioned a moment ago, chances are you will work like a beaver with varying stages of success on some permanent dwelling on some part of the lot.

The trouble is that the Bloomingdale Addition was not segregated as a trailer zone area; it came into the City of Great Falls as a residential zone. People living in the town relied on the classification; they went in there, bought lots, built permanent residences. In some cases they spent a considerable amount of money building

these homes, only to find over a course of two or three years that the trailer home was moving in with them. We have an ordinance on the books, or did have until recently, which allowed a trailer home to locate in an "A" zone, which is our residential zone. That ordinance was passed during the war when our east-side military installation was being built, and many itinerant construction workers came to the city. Most of them came in trailers and had to have a place to put them so the ordinance was relaxed, allowing them to put their trailer in an "A" zone and hook it up to the sewer facilities. After the war, politics being what it is, that ordinance was not repealed until last year against rather terrific opposition; and I might add that the ordinance now is undergoing a test in the courts.

If the person who owned the trailer had left it at that, put his trailer on the lot, landscaped the lot, and lived in the trailer, I don't think there would be much problem. I say that with some reservations; but I think by and large—and I have some pictures which I will show you in a minute—the trailer home could be a good addition to a neighborhood of low cost homes. The trouble begins when the fellow starts to add on to it when his family increases and the trouble gets worse when he starts to build his home on the front of the lot. We are dealing at this stage with this do-it-yourself addict because as far as I can see this causes most of the conflict between the permanent home owner on the one hand and the mobile home owner on the other. I might say that the conflict last spring got so bad that our city council meetings were jammed every Monday night. The people who lived in these mobile homes became known as the "trailer people" and you would have thought to hear some folks talk that they were from some other planet and had two heads and from six to eight fingers on each hand.

It is a fact, however, that trailers in any concentration in any area do depress real estate values, and that is one of the reasons that the owners of permanent residences were so very unhappy. They wanted to move out; they saw the handwriting on the wall and wanted to get out, only to discover to their horror that their homes weren't worth what they had paid for them. So they were stuck.

Now, at some risk, I want to talk just a little bit about this do-it-yourself fan. Bear in mind, as I pointed out at first, that the basic reason why this mobile home is bought in the first place is low income. This means that if he is going to build a home, pay rent on his trailer, pay his down payment, and pay rent on

his lot he is not going to have much money left for building his house; so the home building process is going to be a slow one and it's going to be accompanied by a lot of scrounging around for materials. Box cars will be turn up, bits of boards will appear here and there, and cement mixers are going to be borrowed. The fuss and confusion that accompanies this whole building process make for a messy situation, and this I think is what causes the animosity to develop between the owners of permanent residences and the mobile home owners.

The first picture I have here is a photograph showing a good mobile home layout. I want to point out some things: the fence along the front of the mobile home; the flower bed out in front; the circular drive that goes up to it. Circular drives are usually in front of mansions; nevertheless, here is a trailer home that has a circular drive in front of it. That stuff in the circular drive is good old Great Falls gumbo. I should have taken a picture of the vacant lot next to this place. The sign out there says, "Lot for Sale, \$50 down and \$25 per month." As I said, the situation is tailor-made for the mobile home, and there are two of them; and there is a pretty good residence next to them. I talked to those three people; the fellow in the permanent residence was all right. He said his neighbors are nice people. I asked him about the yard and he said they kept it up fine. He wasn't too unhappy at all, so that's not part of the problem. Now this next picture: I call this one "Gaslight." This mobile home is in the same general area, but note that the owner has added a little shack to his house and it is not like most of the shacks that are added onto mobile homes. It's painted and it looks good. I take the title "Gaslight" from the gas lamp post out in front. I want you also to note the grille work on the stairs, the lawn, the two automobiles and the whole bunch of shacks in back of it. Another thing that sends me about this picture is all the wires going inside that building. There are six wires running into that mobile home.

I don't know whether to laugh or cry at this next picture, which I call "The House on A Hill." You can see just the back end of the mobile home at the rear of the lot and you can see what happened. This is a double lot incidentally with a lot of trees and a dog house. This man, I am sure, had dreams of building a house on this lot, but his family came too fast so he put on a little shack here and nine months at least went by and he found it necessary to build another wing or two here. Our Building Inspector tells me at least 13 regulations are being violated. That does something to me.

The next picture shows the do-it-yourself fan. Construction is under way; this fellow is building a garage. I don't know why he isn't building a house, but he started on his garage first. I want you to note too that he has three cars visible in the picture, but only one of them runs; I thought I ought to mention that. These do-it-yourself people—I happen to be one myself and know what I am talking about—have a way of accumulating things; old car bodies; that big piece of cable you can see in the foreground. Well, he's not going to throw that cable away, he knows darn well the minute he throws that cable away that a couple of days later he is going to have need for it. So he is going to hang onto that cable; it's going to stay right there so he knows where it is. I want you to note the concrete block that is stacked up there. I looked in vain for footings, but some day you will drive by that place and find a fairly good layout.

The trailer doesn't even show in this next picture; you'll have to look real hard at the background. This fellow has built on several sheds out in front. He has created a new architecture.

Here is another one where construction is in progress and you will see that this fellow just built all around his house; the mobile home is just barely visible in this picture. As a matter of fact, there are mobile homes over there that are completely enclosed by sheds of various types going around them.

In this one there is a concrete block house being built right off the picture. When the picture was being taken this gentleman was sitting up there on the roof with a very thoughtful look on his face taking a break from his labors. So I had a little chat with him and I learned that he had taken over the project from somebody else who had moved on to greener fields. I asked him if that was a very prevalent situation and he didn't know whether it was or not. But he guessed that it probably was because that is the way he felt. He said he was getting sick and tired of the construction, coming home at night after a hard day's work and getting up on that doggone scaffold and working under flood lights until 11 or 12 at night. He said, "Boy I'm beginning to think I'll move on too." Most of the power tools and stuff aren't visible here but there are a wheelbarrow, a try-square, saw horses, power saw and I happened to notice a cement mixer. I checked that personally and found a nest of robins. I cite that to illustrate the acquisitive nature of these fellows. That cement mixer was probably scrounged somewhere and stored on his lot against the day when he would need it. In the meantime he is totally oblivious to the fact that

his lot is kind of a clutter and that neighbors might be a little bit peeved with the mess they have next door.

I don't think I have to point out that with construction so slow, it's a very untidy thing not for just weeks or months like most construction jobs. Some of these homes are under construction for years. I know of one case over there where construction has been completely abandoned because the man just stopped. Part of the brick walls are up and he is living in his trailer out in back and he just got tired of the process.

Here we have another good trailer home layout barely visible in the background and then we have this little home in front. As I was leaving after talking to that man a lady drove up and stopped me, and asked if I were the Mayor. When I plead guilty, she said, "I want you to do something about the trailer down at the end of the lot right back of me; I want it out of there." I said, "Where do you live?" She told me, so I went and took a photograph of her house, and here it is. I want you to note the completely irrational nature of this whole matter. After a certain time has gone by logic leaves us, as logic has a way of doing; tempers flare, and the conflict boils down to: "I own a permanent home and am therefore a solid citizen; I have roots and you are the owner of a mobile home; you are a transient and you are a nobody."

You won't find a better-looking layout, permanent or otherwise than this mobile home layout in the background. It's fenced, it has trees, and a hedge, there is an excellent lawn around it and a permanent garage, and the mobile home has pretty little awnings on it; why it's a bride's dream. She was driving a 1959 Olds.

About now you're asking—and here we get back to planning—why these trailer people don't want to live in courts. Why don't they want to go into courts and live there and stop buying lots and bothering all these people with permanent residences. Well, here I have a nice little picture of home, sweet home, that I want to pass around. This is a picture, unretouched, of a trailer court in Great Falls, A.D. 1959. The only building of any consequence is this brick thing, a public wash house. Note the wash on the line. Note the crowded conditions and good old Montana gumbo again; it's not paved. Note the multiplicity of television aerials; but I don't think we ought to get into that. Finally, just by way of passing, I want you to note that dog in the corner. He just about bit my leg off.

We have regulations in Great Falls on trailer courts, but if that trailer court that I showed you can get by, anything can get by. Trailer courts then are only one answer. We've got to take care

of this do-it-yourself fan and I don't think he is going to be too much interested in a court. If he can't build his own home on a lot he's probably going to go outside the city limits. There could be some regulation permitting a man to park his trailer in a court for a year, but I have my doubts about that; frankly I don't think that would work; if we are going to be going back there and hollering at him all the time, there will be violations of the ordinance just as sure as shooting. So we've been thinking in Great Falls that perhaps there should be a trailer zone where a man who wanted to build or just put a trailer on his own lot could put it into that zone, where the lots are perhaps somewhat smaller; and then if you wanted to build a permanent home on the rest of the lot you would be perfectly free to do so but the fact that it was a trailer zone would be known ahead of time.

Trailers are here to stay. They fill a definite need in our economic structure. They fill a definite need in our occupational set-up; I have spoken very little about that today, but the need of the itinerant worker and the highway construction man for them is terrific. And I conclude by saying that we have to provide good planning to accommodate them and not just have them on the streets of our city.

MOBILE HOME PARKS IN THE COMPREHENSIVE PLAN

Marshall K. Powers

Research and Planning Consultant, Mobile Homes Research Foundation, Chicago, Illinois.

Few developments in our housing industry have rivalled the public interest in the spectacular post-war growth of the mobile home industry. Within the past five years this infant industry has produced almost 650,000 homes and today it provides housing for more than 3,250,000 people. Figures recently released by an agency of the federal government indicate that the mobile home industry presently accounts for more than one out of ten housing starts in the United States. When translated into the topic under discussion here this afternoon, these somewhat startling figures mean new opportunities and new problems for those agencies responsible for finding a place in the community scheme for this new housing dimension. Like them or not, mobile homes have become an established part of our national housing pattern. Their existence is an accomplished fact, and is not subject to debate.

The power of a municipality to develop a comprehensive plan

and to carry this plan into action through the enactment of appropriate zoning ordinances stems from the common police power. This power is intended as a safeguard of the health, safety, and moral well-being of the citizenry. Thus, any effort to find a legitimate and logical place for the mobile home park must conform to these basic principles.

Before approaching this problem directly, it would appear that the logical course would dictate that five questions be outlined and, insofar as possible and practical, logical answers be found for them:

- (1) Who are these people who have adopted the mobile home as their peculiar answer to *their* housing problem?
- (2) What unusual conditions will the mobile home park impose upon the community? Does the community have the resources to meet these demands?
- (3) What of the economic impact of the mobile home park upon the community? What will it do to the value of surrounding property? Will it contribute its fair share of taxes?
- (4) What will the mobile home citizen contribute to the life of the community? Will the community be a better place for his residence there?
- (5) What is the logical place for the mobile home park in the comprehensive plan?

The mobile home citizen does not differ materially from his more conventionally housed neighbor. In many respects, when this individual does vary from the norm, he does so on the credit rather than the debit side of the ledger. Occupationally he represents a broad range of skills and professions, with heavy emphasis upon the skilled trades. His income is approximately \$1,000 above the national average. He is active in community, social, and political activities. By personal preference, or by circumstances imposed upon him by his profession, military service, or other, he lives in a mobile home. He does not, however, differ from the average any more than the man who prefers a frame house to a brick, a split-level to a ranch style, or the Cape Cod to the Georgian.

All housing groupings demand basic community and utility services such as roads, lights, electricity, gas, sewer and water. Usually conventional housing developments have most of these services installed and/or maintained at public expense. In the mobile home park, management is responsible for the installation and maintenance of each of these services and utilities. In many cases, the park even provides its own fire protection.

Much has been written and discussed about the problems arising

from the allegedly heavy burden thrown upon the school system by mobile home parks. In most cases these reports are exaggerated. Recognizing that local conditions may vary widely, as a general rule mobile home parks actually bring fewer children into the school system than any other high-density residential land use. An impartial study recently undertaken by the nationally recognized accounting firm of Ernst and Ernst indicates that in those states embraced by the Trailer Coach Association (among them Montana) the ratio of school-age children is 1:13, i.e., one child of school age for each thirteen families. The most conservative estimate has been published in a survey conducted by Michigan State University. In its *Survey of the Mobile Home Consumer*, published in 1959, the ratio was found to be 1:4. This study encompassed the entire nation. It would thus appear that under normal circumstances the mobile home park contributes far fewer children to the school system than any other high-density land use, when age and income factors are held constant.

The planning or zoning official is legitimately concerned about the economic impact of any projected land use upon the community. The most widely discussed aspect of this problem is the relationship of the mobile home park to the over-all tax pattern. It should first be recognized that tax inequities exist on an almost universal basis. Perhaps, like the poor, these inequities we shall have with us always. Where they exist, the mobile home industry stands ready to work with local authorities in working out an equitable tax schedule. No responsible element of the mobile home industry will fail to work toward this end. I cannot, for obvious reasons, speak with authority about the tax picture in your state. Nationally, however, two or three generalizations would seem appropriate at this point:

- (1) The average assessed value of mobile homes per square foot of living space is about the same as or slightly more than that of post-war conventional single-family dwellings.
- (2) The average gross tax paid for a mobile home unit is about the same as, or again slightly more than, that paid for other high-density housing units.
- (3) The assessed value of a mobile home will range as high as 50% of its cost or cash value, which compares most favorably with other forms of housing.

The tax rate for mobile home parks is established by local law and should be treated in the same manner as similar land uses.

When the mobile home park is properly woven into the fabric of the comprehensive plan there is no basis for the widespread

belief that such land use will adversely affect surrounding land values. Actually, the precise reverse is true in many cases. Competent and respected appraisers across the nation repeatedly observe that the mobile home park can have a positive effect upon surrounding land values. This is particularly true where supporting light commercial uses are involved.

The mobile home citizen is increasingly involved in the life of his community. The Michigan State University survey, previously mentioned, reveals that seven out of ten mobile home residents hold membership in some community group. Nearly 40% of this group holds membership in more than one group. Nearly 90% of those questioned indicated that they attend church, with almost one-half of this group attending regularly. Nearly 90% of these families had registered voters in the family, with an average of 1.8 voters per family. Each mobile home family spends about \$200.00 per month in local retail purchases. Most (97%) have bank accounts, with more than 60% of this group having both checking and savings accounts. The average mobile home owner moves no more than once in five years, a figure indicating substantial residential stability. It must be recognized that any group brings some problems to the community. The over-all contributions of this new family to the social, economic, and political life of the community far overbalances these problems and makes him a valued citizen.

And now we come to the final, and most critical, question of all. Where does the mobile home park belong in the comprehensive plan? We should recognize at the outset that each community is, in many respects, unique and that any effort to impose upon every community a stereotyped "master plan" is doomed to failure if this simple fact is not recognized. There are, however, certain basic principles which can be considered with profit by the community seeking an answer to this most difficult question.

First, mobile home parks should be considered as legitimate residential use of land and ought to be recognized as such in the zoning ordinance. Some planners have termed the mobile home park as a "horizontal apartment house." With this in mind, a special mobile home park zone should be created within the residential category of the zoning ordinance, with an "M-H 4" or other similar designation. Efforts to relegate parks to land areas unsuited for residential purposes merely act to compound the problems which already beset the planner and the mobile home industry.

Second, mobile homes should be restricted to licensed parks

in urban and urbanizing communities. In many areas, however, adequate provisions must be made for existing mobile homes before such a step can be taken.

Third, new mobile home parks should conform to rigid standards established by local authorities, with a special commission for mobile housing created to enforce these regulations.

Fourth, a special zone, in some cases a buffer between light industrial and residential developments, could be designated for future mobile home parks. Many planners across the nation are now recognizing that the establishment of the mobile home park zone between residential and commercial districts is considered to be in the best interest of the community.

If these principles are applied, much of that which is commonly referred to as the "Mobile Home Problem" can be eliminated. There is no "best place" for the mobile home park. Each community must work this problem out, taking into considerations. Indeed it may be that there is no "best place" at all in a given community. However, where their use logical and their location consistent with good planning practice, make provisions for them. You will be glad that you did!

COMMUNITY PLANNING AND DEVELOPMENT

DINNER SESSION

Paul B. Blomgren

*Dean, School of Business Administration,
Montana State University*

It is indeed a pleasure for me to address this First Montana Planning Institute. I have enjoyed the sessions it has been possible for me to attend. From my own observations, as well as comments I have received, this is a successful Institute. There is no doubt in my mind that it will be continued in years to come. In fact, the very title, "First Montana Planning Institute," indicates that there are more to come. Those who planned this Institute were indeed good planners—they were looking further into the future than just 1959.

As a freshman dean in your State University, it is gratifying to see that Montana State University is a co-sponsor. We in the School of Business Administration feel very deeply the obligation to serve the State of Montana wherever possible. I'm certain this feeling is shared by other schools and colleges within the University, as evidenced by their participation in this and other such meetings.

For the past twelve years it has been my privilege to observe community planning somewhat as an outsider, yet close at hand. During this period I have taught in a Department of Economics and two Schools of Business Administration, each of which participated in portions of community planning at the request of several localities. In the time remaining, I would like to discuss briefly a few things I have observed in other states. I want to speak with particular emphasis about planning for new industry.

Planning Is Orderly Growth

Planning is nothing but the provision in a community for orderly development and growth. It is the sort of activity that must be undertaken by any institution, business, university, or governmental agency, if progress is to contain as little chaos as possible. However, no business which is forced to make a profit for survival can afford to do the half-way job than many communities do.

Assess the Base

The first thing any business organization does in planning is to assess the base from which it starts. What are the capacities of its human, financial, and machine resources? Only after we have

thorough knowledge of our present position are we able to plan for the future. How many cities have complete knowledge of the base from which they start before they actively seek opportunities for industry growth? From my observation, all too few. The results are often tragic blunders. Let's also make one thing clear: I mean knowledge of more than just mineral and similar resources. It is necessary to have complete knowledge of your labor force, its size and characteristics. You need to know the capacities of your water and sewage systems. What are the capabilities of your fire and police protection services? What are the capacities of your school and recreational systems? What are your tax base and structure, and how much more can they stand without complete revision? What are your problems that growth can either help or intensify? You must know the answers to these and similar questions before you start any planning. Let me illustrate how lack of knowledge or understanding led three cities in other states down the wrong road.

Wrong Industry May Compound Civic Ills

In one city almost all local industry was automotive. As a result, every time car sales declined severe unemployment resulted. The city fathers felt they needed more industry, so they sought out new firms. They actively tried to secure more auto parts firms on some crazy notion that since they had a few it should be easy to attract more. A complete lack of understanding of one of the community's basic economic problems led these people to intensify the fire in which they were already frying.

In another city, there was considerable male unemployment due to closing and moving of a particular plant. Fortunately, however, most of the potential female work force was already employed. "We lost a plant, let's replace it," became the watchword. This city made all sorts of concessions trying to obtain a firm which employed predominantly—female labor. Here again, through failure to understand its own problem, or failure to properly know the firm it was seeking to attract, the city sought to intensify its own problems.

Finally, a third city ardently sought a plant which would manufacture a popular wonder drug. Had the city secured such a plant it would have been necessary to more than double its existing water supply, as this process consumes large quantities of water. The tax base and tax structure of the city were such that this move was in the realm of a dream. The firm recognized the situation and did not locate there. However, in spite of their good intentions,

the industry seekers looked quite ridiculous in the eyes of a major American business.

These are enough examples to illustrate my basic point. Good community planners, like good card players, thoroughly understand their hands before they lay any cards on the table.

"What Industry Do You Need?"

Knowledge of the base not only gives you a firm footing to start with, it also comes close to providing the direction for your next steps. A problem thoroughly understood is a problem more than half solved. Once you know what you have, then you can figure out what you need. People frequently say to me, "We need more industry." I answer, "What industry do you need?" If they can't answer that question they have no business planning the development of their city.

Before I close I would like to discuss one more point which on the surface seems distant from the discussion so far, but is more closely tied than you may think. What does the modern business executive expect of city planning? Many people seem to think that the answer is special privilege; that the only interest of business is dollar profit. This is simply not true of the modern business firm; it does not exist in a vacuum. The thoughtful executive today recognizes that the firm is also a citizen in the community, as are the individuals associated with the firm. As a result, executives are interested in the environment in which this citizen firm must exist, and in which its employees must live.

Executives Want Orderly Development

The executive wants to know that you provide for orderly development of all aspects of the community. He wants to see that provision is made for residential, commercial, and industrial development. For example, if he sees that special privilege has been granted to a few and zoning requirements twisted or changed to suit their whims, he has grave doubts. This whim may be turned against the citizen firm or its employees tomorrow.

In one city, because of complete lack of city-county zoning cooperation, an industrial plant was built adjacent to the city limits and across from the only fine residential district in town. Not only was the plant noisy and unsightly, but it now blocked the only avenue of growth left for that district. The city then added insult to injury by making it possible and most feasible for that plant to dump over 2,000 automobiles through the residential area at 8:00 a.m. and 4:00 p.m. each day. A thoughtful executive com-

mented that this gave all business a black eye. He also commented that this kind of special privilege could be turned against him just as in this instance it favored business. Consequently, he would seek location elsewhere.

No Special Privilege

There may have been a day when business constantly sought special privilege. That day is rapidly passing. There are still some who seek such privilege. These are not the "solid citizen" firms which we are interested in cultivating. The social community and the business community would be just as well off without the self-seekers. The profitable environment for business is not confined to commercial environment alone, but includes the community environment in which its human resources must live.

I do not envy you who are responsible for planning. Yours is largely a thankless task in the present, for you cannot satisfy everyone. Your main rewards are personal satisfaction in a job you can be proud of, and the conviction that the future will remember your efforts with pride. Assess the base from which you start; determine what you need and what you can afford; then plan on all fronts to the best of your ability. Then, and only then, can it be said that you are doing a sound planning job. The fact that you are here shows your intense interest. I am confident that these meetings will prove to have been helpful to you.

EVENING SESSION

PARKS AND PLANNING

RECREATION AND COMMUNITY NEEDS

Harry H. Caldwell

*Associate Professor of Geography,
University of Idaho, Moscow, Idaho*

Cities expand at a regular and more or less orderly pace, but the development of recreation facilities tends to be erratic and dependent upon pressure groups unless provided for in a workable comprehensive master plan.

Virtually every city asks itself, "How much and what kind of recreation do we need?" The attempt to answer this query generally provokes a local controversy because of varying philosophies concerning the services to be provided by the individual or the community. In parts of Montana one would find another element enters the controversy; namely, why spend money to provide costly parks in town when people can reach more impressive sites on national or state forest lands within thirty minutes. Not only are the natural areas superior, their argument goes, but they do not necessitate the costly problems of acquisition and maintenance. One might immediately reply that both types of facilities are needed and that natural areas are not easily within walking distance for small children.

Before attempting to resolve these differences in philosophy and before attempting to provide guides for planning recreation space needs, let us first examine the nature of recreation. Though many regard recreation as a distinct entity usually associated with parks, it is actually so much a part of everyday life that it is sometimes hard to draw the line between what is recreation, what is education, and what is work.

Recreation is simply the voluntary use of leisure time primarily for pleasure or the pursuit of an individual's interests.

For some it may be organized sports; for another, an evening class in woodworking or ballroom dancing at high school. Recreation is also tied to the actual acts, be it the woman who plays the piano at a party for fun or the grim-looking little girl bowing away at her cello in a local school orchestra. When we relate recreation to work we might include the perspiring Sunday gardener at work in a flower bed, who may be enjoying himself equally as much as his neighbor napping in a lawn chair. The truth is:

what is work for your neighbor may be enjoyable recreation for you.

If recreation is so broad, then how do parks fit into the picture? The relation between parks and recreation is ever changing. At one time a park was a private tract of forested land held by an individual under royal grant, used by him and invited guests for hunting and fishing purposes. Today the term "park" means a wide variety of things, ranging from spectacular Glacier National Park to a one-acre pre-school playlot with four swings and one picnic table. In common usage today any outdoor spaces, including school grounds, playlots, playfields and nature areas, are parks—and the fact that they are publicly owned and can be used as recreation areas has encouraged the tendency to refer to *all outdoor recreation areas as parks*. On the other hand, the city must also consider indoor areas and the needs of winter as well as summer.

Concern of the City

If the city is concerned with recreation needs, then for which needs should it provide? Why should it regard one type of recreation as a public responsibility and not another? People's leisure-time activities vary from vigorous sports and athletics to membership in civic organizations, and from "just taking it easy" to personal interests in cultural programs and to the use of commercial entertainment.

Most of us would like to spend our free time enjoyably; however, some individuals simply do not have the personal resourcefulness to make this possible. Instead of recreation, one has idleness. In the elderly, the result may be stagnation; for young people, many different problems may be created and for the adult, frustration and a general loss of local pride or interest. Thus the individual needs both the facilities and the diversity of a program.

If an individual needs recreation, then the city itself has the same need and this is best expressed by the development of a comprehensive local, regional, and even tourist recreation plan for the community. Now comes the question of how much and the companion question of what kind of recreation.

Any rule-of-thumb approaches, such as those listed in the attached tables, are such rough guides that they are virtually meaningless; they are of value only in comparing like cities. An early modification was the recognition of differences between active and passive recreation. Table I lists two in each category. Passive units may contain small segments for active recreation, but the over-all effect is one of more quiet games and observation. One

could elaborate at length on the desirable standards of each facility and the pitfalls to be avoided, such as the numerous small subdivision playlots that can be poorly located and too costly to maintain. However, I prefer to develop another theme, less widely used but perhaps of even greater importance. This is a functional analysis of recreation needs by use categories:

Families—Here “togetherness” is a key to success. Phases of this appear in the quiet non-communicative companionship of a family watching a TV show. More of it can be encouraged by providing picnic areas in and near the community. Water areas lend themselves beautifully to family-type recreation—particularly with the spread of boating. At one time the Sunday band concert played part of this family role, and those of us over thirty-five can recall this period of our youth with fond nostalgia.

Organized Groups—Every community is now highly organized into dozens of educational, social, civic, fraternal, or religious groups. These groups, whether they maintain any full-time staff or not, certainly orient themselves and their activities to the leisure time of their members and should be recognized for their recreational role. As organized groups rarely own the facilities that they use for meetings and programs, they too become dependent upon public and semi-public accommodations both indoors and outdoors. This category normally has a difficult time in finding adequate outdoor facilities for its summer activities. With our highly organized society, there is a definite shortage of attractive indoor and outdoor space for these groups.

Older Adults—are a group rich in leisure time because of a diminishing of other responsibilities and obligations. Here is a group presently representing 8% to 9% of our population but destined to include up to 14% by 1975. Here is a group fighting loneliness, stagnation, the loss of a mate, or social uprooting as they move in with a child. This group needs special recreation facilities: quiet activities, not space-consuming, separated from active recreational areas by hedges, rails, and possibly fences. This group is also a pedestrian group.

Individual Adults—Here is an important yet dangerous category because of the temptation to provide special facilities that might serve only a limited vocal and demanding few. For some, commercial facilities are adequate; for others a library or tennis court or boat-launching facility will serve. The main goal in this category is to broaden the recreation picture for the entire community.

Teen-Age Youth—Diverse recreation facilities and activities are needed to assist this group in establishing self-confidence and a

sense of security. Additional baseball fields may be less desirable than certain indoor facilities such as a year-round swimming pool, opportunities for mixed-group activities, or even an art center or library. For this group the combined school-playground system has proved quite effective.

Elementary School Children and Pre-School-Age Children—provide the major demand group for active recreation. Site selection is a key ingredient to insure a short quarter-mile radius from home and location away from the arterials and free of other hazards. Facilities for this group need imagination and creativity, informal design, treed slopes, hiding places, banks, and ditches; play sculptures make ideal vistas for creative play.

From the foregoing remarks, one should have been able to differentiate between the neighborhood and the community facility. Today we are becoming aware of the development of regional facilities catering to larger service areas and visitor facilities, be they roadside, picnic, or camping accommodations.

Sometimes the facility may be achieved by modifying the master plan and the subdivision ordinance; at other times a bond issue might be needed. In any instance those cities that recognize their recreation shortcomings and remove them will find a new *esprit de corps* developing within and without their cities. From the view of the ever growing number of tourists, it may become the city where they stop, visit, and spend rather than the community they choose to bypass.

Recommended Park and Recreation Standards Play Areas

<i>Description</i>	<i>Age Group</i>	<i>Size</i>	<i>Location</i>
Children's Playlot (active)	Pre-School	1,500-10,000 sq. ft.	Exclusively in congested areas, high density areas, multiples
Neighborhood Play Area (active)	Up to 15 years of age	3-5 acres	Center of a local recreation area, 1 mile sq. or less, 1 acre per 700 persons
Neighborhood Parks (passive)	All ages	4-7 acres	Same as above
District Playfield (passive)	All ages	10 acre minimum	Center of a recreation district, 2 miles sq. or less

National Recreation Association standards indicate at least one acre of publicly-owned park or recreation space for each 100 persons. Another popular standard favors 10% of the community land area in parks and playground. The Public Health Association says, 3 to 4 acres of park per 1000 population. There is a growing trend favoring the multipurpose unit with a 5-acre minimum.

ACQUIRING PARKS IN MONTANA

Gene E. Trotter

Architect; President, Billings City-County Planning Board

I am privileged to be included on the list of speakers today. They are distinguished authorities who have given us much good information. I am pleased to see such a grand turnout from our state and our neighboring states. The interest evidenced by this turnout is most heartening. You have been a good and attentive audience for a long time today so I will be brief.

We are concerned this evening with parks: the last item on the agenda but certainly an important one. A park is, or should be, a thing of beauty; and a thing of beauty—whether it's an idea, a book, a work of art, or a building—is the only thing which has survived the ages of man's history. Beauty is important! When the program committee set up the program they did an excellent job but I confess when Dave Hartley asked me to speak on acquiring parks my first thought was that this was a job for an attorney because of the legal questions involved. Charles F. Pettering said, "A man must have a certain amount of intelligent ignorance to get anywhere," so maybe Dave made the right choice. As an architect I must use my imagination. Imagination is where ideas are born so they can grow into realities, and I'm going to use it now.

I'll begin by talking about colonial times in Georgia before Montanans became interested in planning or parks. In what is now Savannah, General Oglethorpe laid out a grid system. On the points of intersection he erected block houses—each one with an open area around it. This of course was for defense in case of Indian attack. I could almost wish that those same dangers faced every community at its birth. Why? Because now through the foresight of the citizens of Savannah those block houses and the area around them are parks in the downtown area two or three blocks apart in every direction. Also, in colonial times the church, school, shops, and homes were built around a green area which was called a Common. It was a park-like area and it was good for those

communities. Then the villages grew along the highways, which wasn't too bad in those times because the only traffic was an occasional horse-drawn vehicle or a rider.

As our country grew, it grew on the basic principle of individual rights; each man wanted to do as he saw fit with his own property. We sometimes forgot our obligations to our neighbors and our communities because we felt so strongly about our individual rights. In fact, we almost forgot about city planning until recently, even though it is an ancient art.

There are few modern examples of adequate city planning. L'Enfant designed ten square miles of Washington, D.C., in 1770. Longview, Washington, and a few other cities were planned. Let's take a look at New York City. Broadway, the Great White Way, angles across town at a crazy angle for no reason other than that the cows used to take that path. Someone came along after the cows and struck the resounding note for city planning with the foresight to create Central Park near that cow path. Most cities have become overgrown villages but without the amenities of the village, for example the Common.

In my casual observations, I think Montana cities are average in regard to their parks and park development. However, there is much room for improvement. With so much to be desired, let us examine the situation brought about by unplanned growth.

One of the largest problems heretofore has been the inability of Montana counties to zone outside the city limits. The area immediately outside the city limits was naturally the area with the most active development. In that development irreparable damage was done before the area could be brought into the incorporated city; by then it was too late to do anything about it. Great Falls has wisely avoided this sort of thing by keeping its city limits in pace with the development. I congratulate those responsible for that action. As you know, recent legislation has given zoning powers to counties and another big hurdle is passed.

Another problem is the development of parks outside cities. Here again the situation is improving. The last legislature failed to pass House Bill 349, which would have provided a two-mill levy to be used in acquiring and developing parks under a county park commission. In lieu of this, both houses of the 1959 legislature passed Senate Bills 135 and 136. The first permits county commissioners to spend up to \$5,000 out of the general fund to maintain parks. The second provides for the creation of park commissions. Thus another problem is getting attention.

You are familiar with the law requiring a park dedication of from

1/12 to 1/9 of the net platted area in subdivisions of 20 acres or more. If the area is less than 20 acres, the dedication is a matter of discretion with the county commissioners. The shortcomings are obvious. We get 1/12, not 1/9. In areas of more than 20 acres subdivisions are made in separate filings in an effort, sometimes successful, to avoid park dedications. Even in 20-acre plats parks may be too small for that particular location. The parks ordinarily dedicated therein should be combined with other parks nearby; perhaps for existing conditions no park is necessary in that particular area. If the subdivider insists on providing it anyway, the planning board has no choice but to accept it. Strict accordance with the law, then, can make it extremely difficult or even impossible to have a good integrated park system without some other means of acquiring park lands.

In the Billings area park sizes range from one small lot to over 86 acres. We all realize that we need parks of varying sizes in many locations, but some of our parks are small triangular pieces at the intersection of streets; others are boulevards down the center of streets. As Dr. Caldwell pointed out, these are expensive to maintain—they are beautiful and pleasant until we think of that cost. Some of our parks are poorly located in relation to traffic patterns, causing dangerous situations. The distribution of parks of various sizes and their number leave much to be desired. These conditions came into existence under the law which I have cited and I have no doubt that similar conditions are to be found in other cities.

I am suggesting the following as a possible solution to this problem: Change the law to provide that parks be required of all subdivisions regardless of size and use, and give the planning board authority to determine whether or not a particular park should be dedicated or should be deeded to the planning board. The board can in turn sell the land and buy other land to dedicate in a more desirable location to get a proper distribution of parks—the proper size in the proper location. In industrial subdivisions there should also be a park requirement, but here it should be used to provide a buffer strip between the industrial zone and adjoining zones. If the particular subdivision is already completely surrounded by other industrial subdivisions, the park requirement could be transferred to the periphery of that zone.

Would attempting such a revision of our statutes jeopardize our acquisition of parks as we now have it or create inequities worse than those that now exist? I think the attorneys among us can see to it that the answer to both questions is “no.” However, they can’t do it alone. Correcting the past mistakes requires the cooperation

of all planning boards in the state in a planned program of education.

I should like to mention two possibilities for park-like areas which have been provided in the new Billings ordinance. The first, in the central business district, offers an incentive in the form of relaxed restrictions to encourage open spaces such as plazas adjacent to street property lines. Such spaces, if provided when the property is developed, would be allowed to be landscaped.

The second, in residential areas, would permit large developments to be designed showing the location of each house, and if approved by the planning board, would waive the ordinary set-back requirements from all property lines. This is in line with what we heard this morning about performance standards, but it is within a zone rather than an interzonal type of performance standard. It is beginning and it already exists in the Billings zoning ordinance.

If the developer were to take advantage of this instead of having all of the houses on both sides of the street in a straight, monotonous, and unimaginative line, the neighborhood would have more interest and beauty. Each owner would have more usable space on his own property and more interesting vistas. Another possible variation would be curvilinear subdivision, with common parks provided on the interior of blocks for the use of all houses around them. I am sure you are familiar with this development.

These three possibilities of course are permissive only, but they require careful control. They could be dangerous without sufficient study. They create parks not as we have been thinking of them, but park-like areas or private parks. As such they can help alleviate the present shortage of parks, and they are usable spaces while adding to the beauty of the city. Remember how important beauty is again; without it we would be mere animals.

Of course another possibility is the pedestrian mall in central business districts. The problems of creating one are many and difficult of solution; however, the idea is being studied and tried more and more. The inherent possibilities are wonderful. It could be man's answer to his monster from Detroit.

In my opinion we should begin immediately to work for the statute revisions I have suggested. The planning board should be imaginative in preparing zoning ordinances, and pedestrian malls should be studied and tried. The most important thing is first to change our park laws. All of these things will help Montanans get parks closer to home than Glacier or Yellowstone. Those national parks required the same foresight which we must use now.

It is already too late, economically, to get parks in some areas

that need them very badly. With our rapidly growing population there is no time to waste. What we do today determines whether we have cow paths or Central Parks tomorrow. Every day that passes without action penalizes the people and most of them are not even aware of the problems.

We on the planning boards of the state must acquaint everyone, and especially the legislators, with the facts. If we make a concerted effort immediately to do this we can still make Montana truly a park state.

FIRST MONTANA PLANNING INSTITUTE

REGISTRATION

Ralph Aaker
City-County Planning Board
Star Route
Bozeman, Montana

Richard M. Arenz
Bureau of Public Roads
651 N. Rodney
Helena, Montana

J. Haslett Bell
625 Cascade Building
Portland, Oregon

Dr. Paul Blomgren
Dean, School of Business Admin-
istration
Montana State University
Missoula, Montana

C. H. Brinck
State Board of Health
State Laboratory Building
Helena, Montana

Dr. Gordon Browder
Dept. of Sociology
Montana State University
Missoula, Montana

Gerald Brown
City-County Planning Board
418 9th St. No.
Great Falls, Montana

Mrs. Henry G. Bugbee
League of Women Voters
1600 Charlott St.
Missoula, Montana

Dr. Harry Caldwell
University of Idaho
514 S. Howard
Moscow, Idaho

Willard Carlson
City-County Planning Board
514 Seventh
Havre, Montana

Mayor Walter A. Cash
City of Missoula
City Hall
Missoula, Montana

Dr. Edward J. Chambers
School of Business
Montana State University
Missoula, Montana

Robert W. Christensen
FHA
417 84th Ave. N.E.
Bellvue, Washington

L. T. Christian
City-County Planning Board
910 N. 32nd St.
Billings, Montana

W. Boyce Clark, President
City-County Planning Board
Box 98
Miles City, Montana

Don Coe
Sanders County Chamber of
Commerce
Plains, Montana

Tom Collins
City-County Planning Board
125 West Main
Missoula, Montana

J. Morley Cooper
City-County Planning Board
1820 Winnie
Helena, Montana

William H. Coibion
Leo A. Daly & Associates
49 Maiden Lane
San Francisco, Calif.

Everett Darlinton
State Planning Board
Sam W. Mitchell Building
Helena, Montana

Hiram S. Dotson, President
City-County Planning Board
Box 1731
Helena, Montana

Mrs. D. L. Engleking
City-County Planning Board
1017 W. Porphyry
Butte, Montana

Claude W. Eyer
City-County Planning Board
200 So. Sargent
Glendive, Montana

Chan Ettien
City of Havre
Box 100
Havre, Montana

Roman C. Fargo
City-County Planning Board
1135 McKinley Ave.
Havre, Montana

Paul Ferryman
State Highway Department
50 Tower Hill
Helena, Montana

D. P. Fabrick, Chairman
State Planning Board
Choteau, Montana

L. C. Gerckens
School of Architecture, M.S.C.
410½ N. Fifth Ave.
Bozeman, Montana

Charles Greenfield
City-County Planning Board
Courthouse
Helena, Montana

H. Cleveland Hall, President
City-County Planning Board
Box 1744
Great Falls, Montana

Mrs. John Nelson Hall
City-County Planning Board
212 12th St. No.
Great Falls, Montana

Walter R. Hall
City Council
Box 175
Livingston, Montana

Howard Hammer
City of Kalispell
573 2nd Ave. W. N.
Kalispell, Montana

Dave Hartley
State Planning Board
Sam W. Mitchell Building
Helena, Montana

Walter Hensley
City Council
937 1st Ave.
Havre, Montana

Francis Howard
City-County Planning Board
832 N. Rodney
Helena, Montana

Sid F. Howard
City-County Planning Board
c/o Florence Laundry Co.
Missoula, Montana

Kenneth V. James
HHFA
450 Federal Office Bldg.
Seattle 4, Wash.

Thomas F. Joyce
City-County Planning Board
2501 Gladstone Ave.
Butte, Montana

Charles Kaiser
City-County Planning Board
417 Tatrow Street
Miles City, Montana

James Keyes
City-County Planning Board
2530 Elm St.
Butte, Montana

Alfred W. Klingler
Montana Municipal League
Box 456
Shelby, Montana

H. D. Korslund
City-County Planning Board
Box 113
Bozeman, Montana

W. J. Leary, City Manager
City of Helena
801 Broadway
Helena, Montana

Louis H. Lienemann
City-County Planning Board
721 W. Galena St.
Butte, Montana

Charles Liquin
City-County Planning Board
510 W. Hayes
Bozeman, Montana

Wm. Lucier
County Commission
Route 2
Missoula, Montana

Laurie McCarthy
State Planning Board
Sam W. Mitchell Building
Helena, Montana

L. B. McClintick
City-County Planning Board
655 5th Ave. W. N.
Kalispell, Montana

Alex McDonald
City-County Planning Board
913 Antimony
Butte, Montana

Russell C. McDonough
City-County Planning Board
302 South Nowlan Ave.
Glendive, Montana

Dr. Raymond H. McEvoy
Dept. of Economics
Montana State University
Missoula, Montana

A. G. Miller
City-County Planning Board
Box 741
Miles City, Montana

David D. Moore
Battelle Memorial Institute
505 King Ave.
Columbus, Ohio

A. J. Mosby
City-County Planning Board
127 E. Main
Missoula, Montana

W. F. Murray
City-County Planning Board
Miles City, Montana

Dr. Harry Newburn, President
Montana State University
Missoula, Montana

Karl G. Page
Idaho Falls Planning Commission
945 7th St.
Idaho Falls, Idaho

Vernon R. Peterson, President
City-County Planning Board
245 West Main (Box 49)
Missoula, Montana

George Plescher, Director
City-County Planning Board
112 Riverview
Great Falls, Montana

J. R. Porten, President
Chamber of Commerce
321 Main St.
Miles City, Montana

Dr. Marshall Powers
Mobil Homes Mfgs. Assn.
20 N. Wacker Drive
Chicago 6, Illinois

Dr. R. J. Rasmussen, President
City-County Planning Board
Box 747
Glasgow, Montana

Verne B. Reed
City of Livingston
418 So. 11th
Livingston, Montana

Maurice RiChy
State Highway Department
502 Madison
Helena, Montana

Gordon W. Russell
City-County Planning Board
311 W. Clement
Glendive, Montana

Henry J. Sawtell
Member, State Planning Board
P. O. Box
Miles City, Montana

R. C. Setterstrom
Montana Power Co.
40 E. Broadway
Butte, Montana

Fred W. Schepens
City-County Planning Board
221 N. Merrill
Glendive, Montana

Frank B. Shanley
City-County Planning Board
P. O. Box 1688
Great Falls, Montana

George A. Shay, President
City-County Planning Board
1222 2nd Ave. West
Columbia Falls, Montana

Bruce Shelton
Chamber of Commerce
4126 4th Ave. South
Great Falls, Montana

H. E. Smith
Sanders County Commissioner
Hot Springs, Montana

C. W. Sorenson
City-County Planning Board
317 McDougal
Glendive, Montana

E. O. Sowerwine, Jr., Director
State Planning Board
Sam W. Mitchell Building
Helena, Montana

Richard Spangler
Dept. of Economics, M.S.U.
224 Pattee
Missoula, Montana

J. R. Sparrow
Safeway Stores
3000 Keokuk
Butte, Montana

Stacy L. Struble
Aero Service Corp. (Western)
483 "D" St.
Salt Lake City, Utah

F. Paul Sutton
Federal Housing Administration
414 S. Roberts
Helena, Montana

Mayor William Swanberg
City of Great Falls
Courthouse
Great Falls, Montana

James Tannehill
City-County Planning Board
404 Hemlock Forest Park
Glendive, Montana

Ron Thompson
Ronald Thompson & Associates
Silver Bow Block
Butte, Montana

F. E. Tonrey
Mobil Homes Mfgs. Assn.
117 S. Alvarado
Los Angeles, Calif.

Gene Trotter, President
City-County Planning Board
1222 No. 27th
Billings, Montana

T. S. Veazey, Jr., President
City-County Planning Board
P. O. Box 427
Butte, Montana

Dr. Ellis Waldron, Dean
Graduate School
Montana State University
Missoula, Montana

Cameron J. Warren
City-County Planning Board
Box 1347
Missoula, Montana

Oscar E. Wendt
County Commissioner (also
City-County Planning Board)
Courthouse
Kalispell, Montana

David Wessel
School of Architecture
Montana State College
Bozeman, Montana

